AUGUST 6, 1951 NEWS ISSUE

Electrical World

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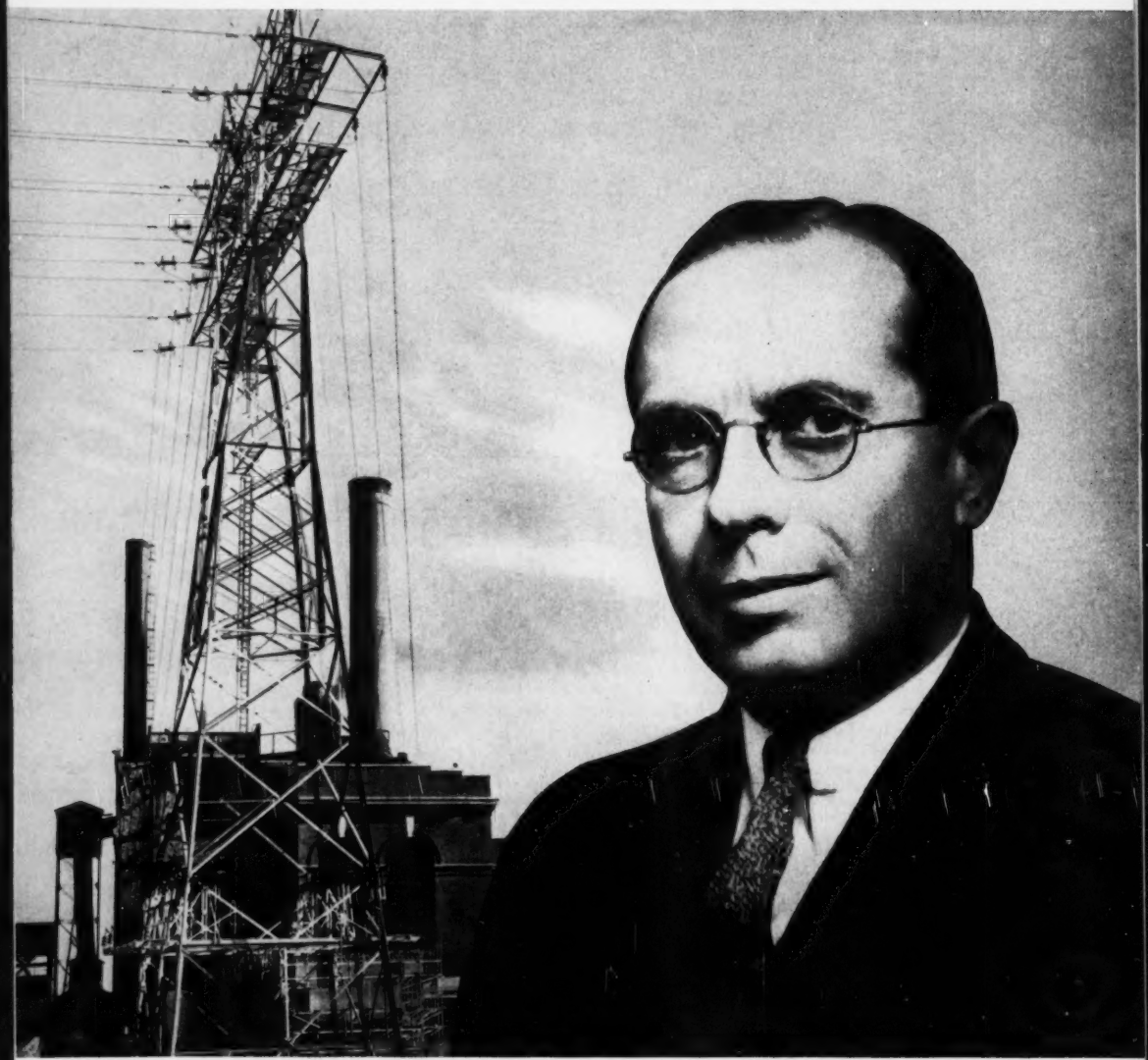
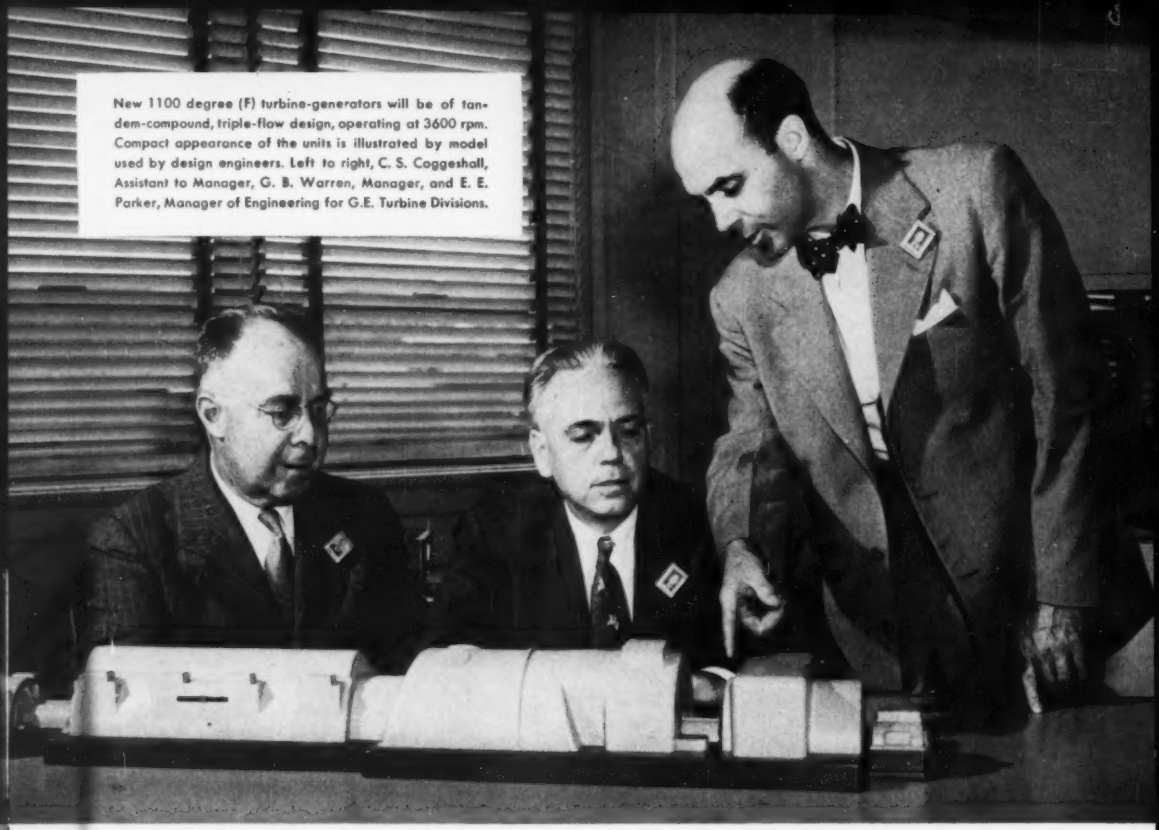


Kenneth P. Applegate, new president of Hartford Electric Light Co

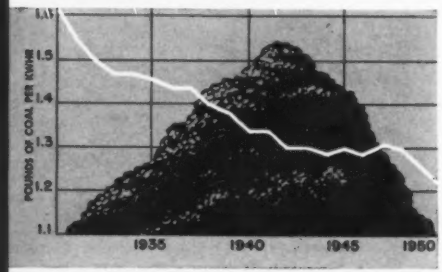
The Crews Used Everything But an Ark ..... Page 16

CMP Hits Construction ..... Page 30



New 1100 degree (F) turbine-generators will be of tandem-compound, triple-flow design, operating at 3600 rpm. Compact appearance of the units is illustrated by model used by design engineers. Left to right, C. S. Coggeshall, Assistant to Manager, G. B. Warren, Manager, and E. E. Parker, Manager of Engineering for G.E. Turbine Divisions.

Higher turbine temperatures and pressures require rigid quality control of all components. Here, representatives from Engineering, Manufacturing, and the Works Laboratory are studying an X-ray of the top of a valve chest.



Coal consumption per kw-hr has steadily decreased as higher temperatures and pressures have been used. In 1950 the utility industry average was 1.19 lb per kw-hr, and latest figures show a further reduction to 1.14 lb.

1100 F turbines mark new step forward in fuel economy

Two new 145,000 kw turbines for the Kearny station of the Public Service Electric and Gas Company, New Jersey, are now under construction at General Electric. They will be the first turbines to operate at initial steam temperatures and pressures of 1100 F and 2350 psig, and reheat temperatures of 1050 F.

The significance of these new turbines to the electric utility industry seems clear. Here is a new step forward in the industry's continuing efforts to generate more electric power with less fuel consumed for every kilowatt-hour produced.

With the application of increasing temperatures and pressure made possible by improved turbines, boilers, and auxiliary equipments, average consumption of coal per kilowatt-hour is now only 1.14 lb—a reduction of 40 per cent over the past 25 years. But this is only the average. The highest temperature turbines now in operation, using steam at 1050 F, produce one kw-hr for every three-quarters of a pound of coal consumed.

The latest increase to 1100 F will bring new high levels of efficiency and consequent fuel economy. General Electric Co., Schenectady 5, N. Y.

MORE POWER TO AMERICA

GENERAL ELECTRIC

301-159

The Electrical Week

INDUSTRY MOBILIZATION—(Page 4) CMP announces metals allotments for fourth quarter . . . Depa's Construction Expediting Branch is busy aiding utilities get equipment on schedule . . . Co-ops are hit by material shortages . . . Tungsten is in short supply . . . Industry M Orders are listed.

WASHINGTON—President Truman's attack on industry's Farm Electrification Week draws reply from Gadsby and Parker (p 5) . . . FCC to end "freeze" on increases in power of TV stations already in existence (p 6) . . . AEC has two alternatives in the long-range program for use of atomic energy in the industry (p 11) . . . House tables St. Lawrence Seaway Project as Canada threatens to build it without U. S. cooperation (p 12) . . . Interior Secretary Chapman ordered to report whether his department is continuing to plan Central Valley-Bonneville tie against expressed wishes of Congress (p 12).

ELSEWHERE—Canadian output tops five billion kwhr in month for first time (p 6) . . . Texas Power & Light Co to build and run lignite-burning plant for Alcoa to supply smelter (p 11) . . . CMP hits construction (p 30).

• • •

Latest from Washington—Maximum load for 1951 is now estimated at 69 million kw, Interior Secretary Chapman told Senate Appropriations Subcommittee . . . Depa is preparing to request information from utilities as to how they are faring in placing materials orders . . . In its rebuttal brief in Roanoke Rapids case, FPC says Interior Secretary is overstepping his authority in trying to head off construction of private utility dam—that it is up to Congress to decide whether or not there should be a Roanoke Valley federal power system.

Production of most major appliances is dropping, sales are declining, and inventories are growing. In mid-July manufacturers had 740,000 TV sets on hand.

Recent Kansas-Missouri disaster has brought flood control propagandists to the fore. They are advocating Pick-Sloan Plan at this point with the Missouri Valley Authority Plan taking a back seat. Mention of the power aspects of Pick-Sloan was singularly rare up to now.

Depa officials are worried about the cut DPA made in its fourth quarter allotment of structural steel (See table p 4). The request for structural steel alone was 137,000 tons; only 105,000 tons were granted. An appeal for a supplementary allotment is likely.

Heavy irrigation pumping brought season peak of Pacific Gas & Electric Co to 2,873,100 kw on July 27—a cool 354,000 kw above last year.

A determined fight to put authorization for the St. Lawrence seaway and power project into the $8.5-million foreign aid bill has been promised by Senator Blair Moody, Democrat of Michigan (See p 12).

No plans have as yet been prepared for the new generating station on the Patapsco River south of Hawkins Point, Charles P. Crane, president, Consolidated Gas, Electric Light & Power Co of Baltimore has announced. It will "probably be built for service in 1955 or 1956 to house an initial unit of perhaps 100,000 kw or 125,000 kw capacity," he reported.

Staggered hours and night working in England's industry will again be necessary this winter to reduce electricity consumption at peak periods, the National Joint Advisory Council has decided.

Effective Aug. 1, price cuts, averaging 4% for quantity buyers of at least $5 worth of fluorescent lamps, have been announced by Westinghouse Electric.

Glum silence from power-minded Oscar L. Chapman, head of the aluminum program, has greeted Alcoa's plan to add 85,000 tons of aluminum capacity. Reason: Chapman and the Justice Department (Anti-Trust Division) don't want Alcoa, Kaiser, or Reynolds to get much bigger. They would like to see others enter the field. If it can get quick amortization, Alcoa will finance power plant to be built and operated by Texas Power & Light Co. This lignite-burning plant would supply Alcoa's needs and would aid utility.

Ohio Power Co's Central Division (290 employees) struck July 31 to join 680 power plant employees already out. Union is demanding 5% increase retroactive to last October. Company has offered 5% with 2% subject to arbitrators or Wage Stabilization Board. In addition company has offered a 22¢-per-hr package to plant workers and 20¢-package to Central Division workers. Union rejected both offers. Supervisory workers are maintaining full service in plants and Central Division.

Atlantic City will celebrate its centennial in 1954, the year the electric industry will celebrate its diamond jubilee. One of AC's business leaders planning the centennial celebration is Bayard L. England, president of the Atlantic City Electric Co.

CMP Metals for Power Agencies—4th Quarter

Metal	4th Quarter Allotment	4th Quarter Requests	3rd Quarter Allotment
Defense Electric Power Administration			
Steel	289,176 tons	340,581 tons	300,000 tons
Copper	80,852,000 lb	95,801,000 lb	77,000,000 lb
Aluminum	35,500,000 lb	43,726,000 lb	38,000,000 lb
Electrical Equipment Division of NPA			
Steel	571,530 tons		566,410 tons
Copper	148,700,000 lb		131,497,000 lb
Aluminum	27,000,000 lb		26,488,000 lb
Engine and Turbine Division of NPA			
Steel	461,600 tons		621,350 tons
Copper	15,070,000 lb		12,720,000 lb
Aluminum	2,600,000 lb		3,271,000 lb

Depa Branch Busy Aiding Utilities to Secure Equipment When Needed

These are busy days at the Construction Expediting Branch of Defense Electric Power Administration. The group, which is charged with expediting equipment needed for the electric power expansion program, blames CMP.

Last December the branch was handling about ten requests a week for materials worth about $200,000. By April the totals were 62 requests and $2 million. By July there were between 80 and 150 requests with the value of materials in the peak week rising to $8.5 million.

A. G. Skina, branch chief, believes the sharp July increase was due to three factors:

1. The rush to get action on the DO-rated orders before the shift to CMP.

2. The increased concern that in-service schedules were not being met.

3. The tendency to seek aid during the unsettled period of the shift from DO to CMP-rated allotments.

Skina believes one other factor may have a bearing—the branch is becoming more widely known in the industry. He believes "satisfied customers" are passing the word along.

Here's how the branch operates:

A utility asks aid in securing one or more pieces of equipment. It is asked to supply certain information including the date when the equipment is needed. If the data are convincing, the branch usually gets in touch with the manufacturer. This usually does the trick. If it doesn't, the branch turns its information over to the National Production Authority which then deals with the manufacturer.

In a case where the equipment fits into a vital defense project, Skina will ask that NPA issue a directive to the manufacturer specifying the date of delivery for a specific item. However, this extreme measure is reserved for projects directly tied in with military or defense projects. It has been used but once or twice.

The branch's big problem in handling requests by utilities is always the effect on the whole expansion program. Caré must always be taken that in pushing one piece of equipment another more vitally needed is not delayed.

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Tungsten Supply Short

A 50% increase in production of tungsten carbide since the beginning of the Korean War still leaves producers far behind demand, the industry has reported to the National Production Authority. The present deficit of tungsten is 400,000 lb a month.

Material Shortages Hit Construction by Co-ops

Materials shortages have slowed construction by Rural Electric co-ops, and the pinch is expected to be felt more widely toward the end of the third quarter.

Rural Electrification Administration said no individual co-op has reported that lack of materials has halted any project. However, more than 60 complaints have been received from the co-ops protesting the curtailed third-quarter allotments and telling of slow-downs due to shortages.

Co-ops also report they are having trouble placing orders with manufacturers. These turn-downs are expected to be felt on the construction level in the latter part of the quarter when material deliveries could have been expected under ordinary circumstances.

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Industry M Orders

The following M Orders of interest to the electrical industry have been issued by the National Production Authority. Orders not of interest have been omitted. Copies may be secured from the National Production Authority, Washington 25, D. C., or any regional office of the Department of Commerce.

M-76 allocates the available supply of **soft pig lead** produced by primary refiners and establishes limitations on the required acceptance of rated orders for pig lead products and alloys. It also incorporates the restrictions on distribution of lead and lead products in M-38.

Amendments to Previous Orders

Amendment to M-8 corrects and revises amendment issued July 1.

Amendment to M-19 eases restrictions on use of **cadmium** to permit increased use in a wide range of military and civilian products. Also amends the 30-day inventory restriction to permit accumulation exceeding this amount when necessary because of minimum purchasable quantities.

Amendment to M-67 broadens the **aluminum foil** order to include all types except insulation foil. Also establishes quarterly instead of monthly quotas.

On the Cover

Portrait of Kenneth P. Applegate, Hartford Electric Light Co's new president (see News About People, p 22) is superimposed on photo of system's South Meadow Station. Born in 1920, the plant "grew up" through four additions to its present capacity of 234,000 kw. The company considers it full grown now, and is looking around for an additional plant site.

REA PROMOTED these three men to replace administration officials killed in Colorado plane crash June 30 (EW, July 9, p 13). Left to right, they are S. Riggs Sheppard, assistant administrator; Richard A. Dell, chief of the Applications and Loans Division; and Elbert E. Karns, chief of the Management Division

Truman Attacks, Spokesmen Defend Industry's Farm Electrification Week

President Truman and the REA last week kicked off an attack on the electric industry's "Farm Electrification Week," which is to begin Aug. 26.

The President took the lead in a letter to James G. Patton, president of the National Farmers Union, in which he called the scheduled celebration "a publicity stunt."

REA followed with a statement that farm electrification is not so far along as either that agency or the power industry had believed. It supported the case against its own previous surveys with available figures from the 1950 census.

The attack drew immediate replies from George M. Gadsby, president of Edison Electric Institute, and J. W. Parker, chairman of the steering committee of the Electric Companies Public Information Program. Gadsby called the work of private companies in supplying the farms "a great accomplishment," and Parker said the President had made his statement "apparently without having all the facts in front of him."

"On the basis of preliminary census information," the REA statement said, "there still are more than three-quarters of a million farms without electric service."

In his letter to Patton, the President said, "No doubt some people can be led by deception to believe that the rural electrification job is now completed. However, I cannot believe that many will be fooled—certainly the hundreds of thousands of rural families who are still waiting for the blessings of electric light and power will not be fooled.

"Publicity stunts and rosy pronouncements by the power industry never have electrified any farms."

He said when the time comes to celebrate the completion of rural electrification, it should be up to the rural people, themselves.

"For the present," the letter continued, "those who are sincerely interested in the welfare of our agriculture and our country will certainly do all they can to electrify the remaining unserved rural establishments rather than be satisfied with an unfinished job."

Gadsby, president of Utah Power & Light Co as well as the industry's trade organization, commented, "The proposed Farm Electrification Week to be observed across the country during the last week in August marks a great accomplishment, President Truman to the contrary notwithstanding. We are celebrating not the final crossing of the goal, but the fine score at the end of the first half."

More than 30 years ago, Gadsby said, a few progressive electric companies, manufacturers, and some of the older farm organizations began joint studies and research into possibilities of electricity in agriculture. Today, he said, electricity is available to 95% of the nation's farms. At the end of 1950, he pointed out, private power companies, a few municipalities, and other public bodies supplied 51% of these farms, and local REA-financed cooperatives, 49%.

Parker pointed out that nowhere had the industry claimed the job of rural electrification was complete, but had on the contrary emphasized that the high availability of electric service to the farms opens new avenues of better living and greater national preparedness.

"The investor-owned power companies," Parker said, "recognize freely the contributions which REA co-ops have made to the farm electrification movement . . . Focusing public attention on farm electrification should stimulate completion of the job both by private capital and the REA."

The PIP committee chairman said it would appear the President had been misled by those who are more interested in promoting the extension of federal power projects than in performing objective public service.

"There are some farmers," Parker commented, "just as there are some city folk, who never will take electric service even though it is available. Any attempt to create a cleavage between the companies and the operating REA co-ops should be recognized for what it is."

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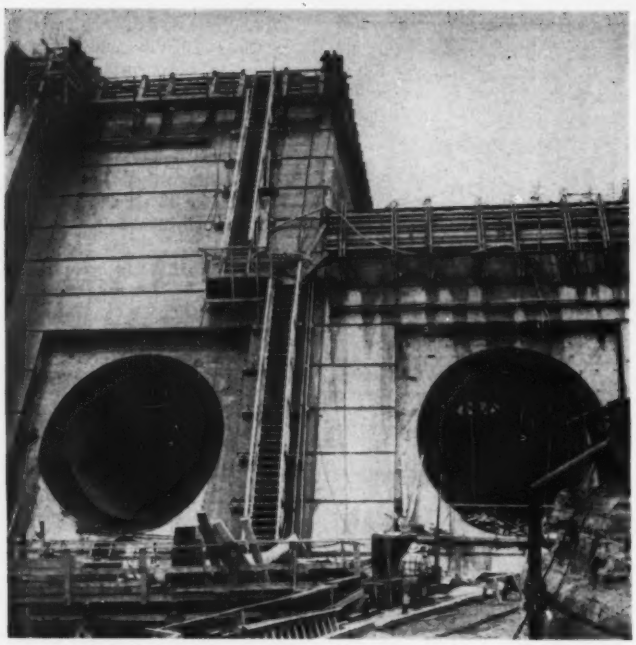

MT MORRIS DAM in Genesee Gorge, New York, is planned only as flood control dam, and as such will be one of nation's largest. Army Engineers provided penstocks, however, should plans change. Yawning mouths will be capped with concrete.

Canadian Output Tops 5 Billion Kwhr for Record

Canadian central stations had their first 5-billion kwhr month in May. The total was 5,130,278,000 kwhr. Consumption of primary energy also reached a record high of 4,407,377,000 kwhr. Gross exports to the United States though not a record reached 231,344,000 kwhr, highest since August 1946.

It took the Canadians exactly 3 years to increase monthly output from 4 to 5 billion kwhr. Previously each billion-kwhr increase took approximately seven years. September 1926 was the first 1-billion-kwhr month. The 2-billion mark was reached in December 1934, and the third in October 1941.

May is almost always the high month of the year because of the favorable water conditions—hydro capacity accounts for about 98% of all production. This year because of the rapidly increasing demands for power by industries and the amount of new capacity going on the line, the record may be topped a number of times. For 27 successive months primary usage has been higher than that of the corresponding month a year previous.

The following statistics, supplied by the Dominion Bureau of Statistics, are in thousands of kilowatt hours:

Period	1951	1950
Five Months' Output	24,096,319	20,541,809
Primary	22,037,871	19,110,175
Secondary	2,058,448	1,431,634
Primary Consumption	21,379,932	18,477,476
Net Exports to U. S.	996,880	845,008
May Output	5,130,278	4,425,140
Primary	4,541,155	3,941,393
Secondary	589,123	483,747
Primary Consumption	4,407,377	3,803,521
Net Exports to U. S.	231,197	199,275
April Output	4,895,491	4,070,021
Primary	4,356,259	3,789,167
Secondary	539,232	280,854
Primary Consumption	4,227,187	3,655,915
Net Exports to U. S.	208,094	190,595

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Two Appointed to PSC

Commissioners J. C. Darby and F. B. Hines have been elected chairman and vice chairman respectively of the South Carolina Public Service Commission for the fiscal year 1951-52. B. H. Barre, chief engineer for the commission, has retired after 29 years' service.

FCC to End 'Freeze' on TV Stations' Power

As the first step in relaxing its 34-month "freeze" on television transmission, Federal Communications Commission has decided to consider applications for increased operating power from stations now in existence.

This action comes ahead of new channel allocations, expected later this year.

Many TV stations are now operating at less than their authorized maximum power. Upon approval by FCC, these stations will be allowed to go up to maximum providing the increase does not interfere with proposed channel allocations in their region. The increase would extend coverage and improve service in fringe areas.

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Oregon Utility Receives Permission to Expand

The California Oregon Power Co, Medford, Ore., has been granted permission by the Federal Power Commission to amend its license to include two additional hydroelectric developments as part of the company's Toketee Project on the North Umpqua River in Douglas County, Ore.

The additions, the proposed Slide Creek and Soda Springs developments, which are to be located immediately downstream from the Toketee powerhouse, will increase the installed horsepower capacity of the Douglas County project from 55,800 hp to 96,800 hp.

Both developments will provide diversion dams across the North Umpqua River.

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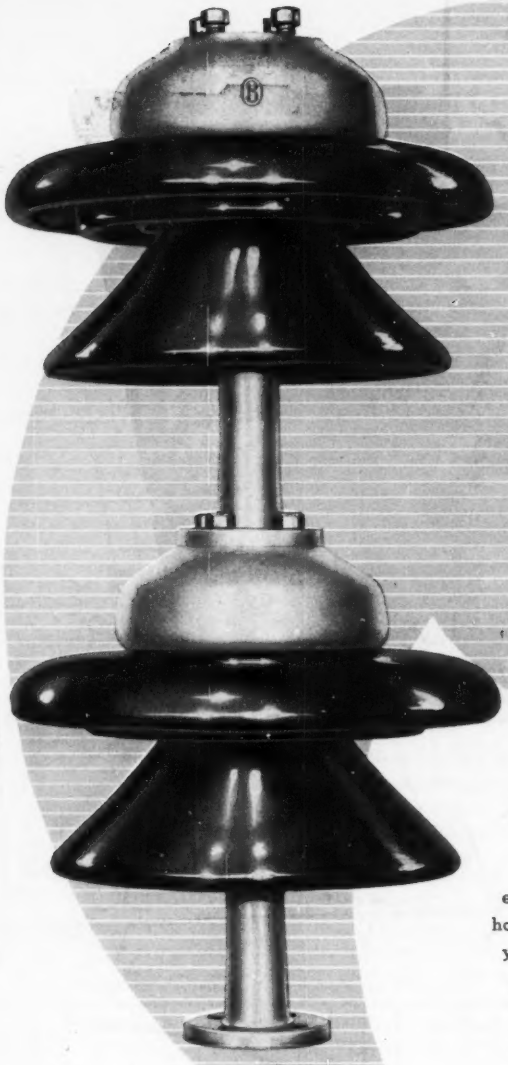
India's Damodar Project to Add 120,000 Kw in '55

India will add 120,000 kw to her power supply and bring an additional one million acres under the plow when the first phase of the Damodar Valley Corp Project, India's TVA, is completed in 1955, the government has announced. Four dams are included in the project.

A more immediate supply increase will be made when the 150,000-kw Bokaro Power Station, largest in India, goes into operation in the coming months.



There's no instrument to measure value

According to national standards, station insulators are measured many ways - size, strength, thermal resistance, dielectric properties. These measurements assure a uniform product among manufacturers - *uniform except for value!* No instrument will tell how long the insulator will give satisfactory performance, yet this is the real measure of your dollar's worth . . .

Confirm this if you wish: the vast majority of O-B station insulators are bought by power companies some of whose records of performance go back as much as 30 years or more. Ignoring all sales arguments, these companies evaluate insulators on their own terms . . . Measured in dollars per year, there is still a bargain in station insulators - O-B!

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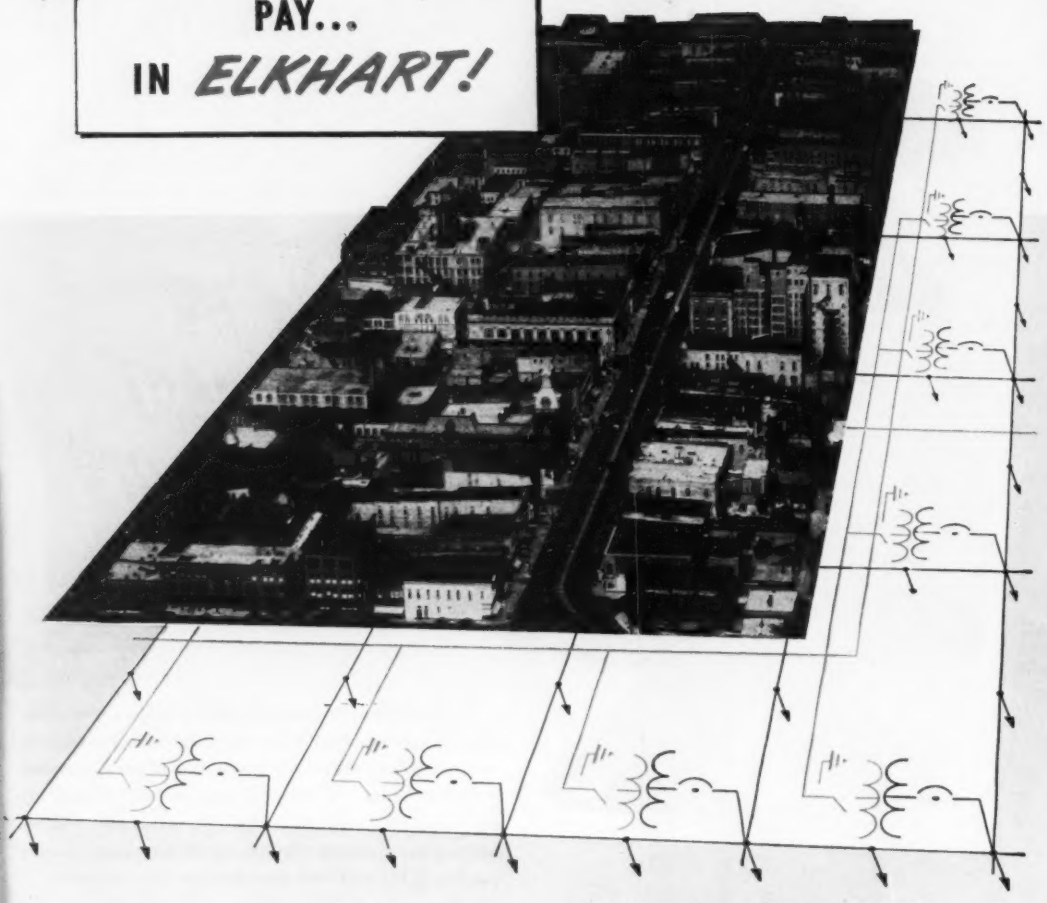
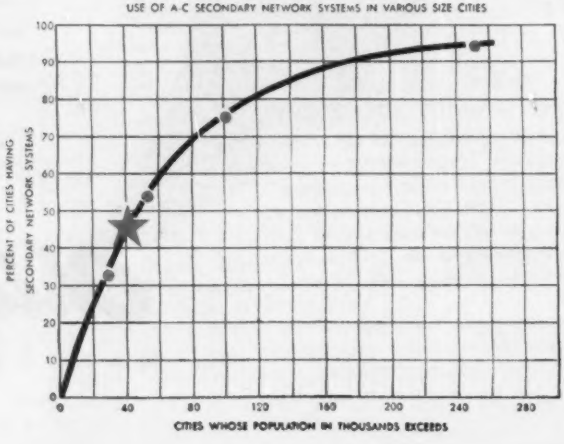
NETWORK SYSTEMS PAY... IN *ELKHART!*



FACTS ABOUT ELKHART'S A-C SECONDARY NETWORK SYSTEM.

The secondary network system is supplied from 13 vaults having a total capacity of 3,900 kva. The area covered by Elkhart's network is almost 20 square blocks, containing 3.61 miles of conduit, 5.47 miles of primaries and 2.27 miles of secondary feeders.

One third of all cities in the United States with a population of 25,000 or more have network systems, while one half of all cities with a population of 50,000 or more have network systems.



17 years' uninterrupted service... no voltage-regulation problems

There's no power service problem in the business district of this bustling Indiana town of 40,000 . . . they took care of that 17 years ago. Then, Elkhart was struggling with an overloaded radial system, consisting of 3-phase primaries and both 3-phase and single-phase secondaries . . . tranformers were mounted on practically every pole. The Fire Department and fire underwriters were concerned . . . the utility was plagued with voltage-regulation problems.

OVER AND UNDER . . . In 1934 the Indiana and Michigan Electric Company met the problems of Elkhart's business district by installing an *A-C Secondary Network System.* Transformers and primaries were placed underground . . . the secondaries and services overhead. This overhead and underground combination, particularly applicable to smaller cities and towns, made possible great economy in the original installation cost.

IMPROVED SERVICE . . . The A-C Secondary Network System has resulted in a high standard of continuity of service and uniformly good voltage-regulation, not attainable through radial distribution systems. Underground placement of the primaries and transformers has greatly reduced congestion and improved appearance.

ABOUT MAINTENANCE . . . Maintenance story here is typical of all users of secondary networks . . . it's low, almost negligible. The utility reports that in 17 years of operation, there has never been a complete interruption of the system. Underground crews like the convenience of maintaining the system. They know . . . they work with the equipment.

CUSTOMERS AND UTILITIES BENEFIT . . . Utility customers appreciate the high-quality service and uniformly good voltage-regulation afforded by network service. The utility benefits from reduced operating and maintenance expense and improved customer good will. Large or small, your town can have high-quality network service . . . at a cost commensurate with the benefits this service affords. Westinghouse makes this equipment and can help in your planning. Call or write: Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

J-97155

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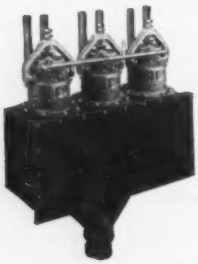
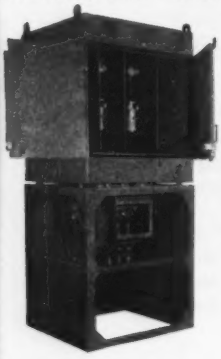


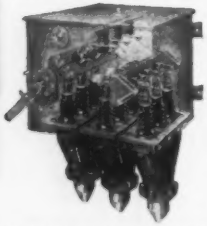
Type "FCBX" Fuse-Switch Boxes with gang-operated oil fuse cutouts mounted on cable connection compartments are rated 2500, 5000, and 8000 volts with interrupting capacities of 6000, 6000, and 3750 amperes (RMS per phase) respectively. When used within the limits of their short circuit interrupting capacity, Type "FCBX" units have wide application as primary disconnecting and protecting equipment at load distribution centers or at main sub-stations of small plants.

PROTECT AND DISCONNECT LARGER LOADS



Type "RA-SC" Fuse-Switch units with Type "RA" load break oil switches and Type "SM" power fuses are rated 7,500 and 15,000 volts with interrupting capacities of up to 30,000 amperes RMS. Continuous current carrying capacity of units and load break rating of switches is 400 amperes. A fused load can be supplied from either of two feeders through a double throw "RA" switch and the unit may be equipped with a G & W automatic transfer mechanism to assure service continuity if the normal feeder fails.

LOAD BREAK OIL SWITCHES



Type "RA" load break oil switches are made in any switching arrangement necessary to meet individual distribution problems. 7,500, 15,000, and 23,000 volt units with full 400 ampere load break are widely used in single and double throw units or in special units with two or more sets of links.

G & W engineers or engineering representatives will be glad to help you select the proper G & W equipment for your problem whether it requires a single unit or a complete primary distribution system.

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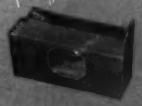

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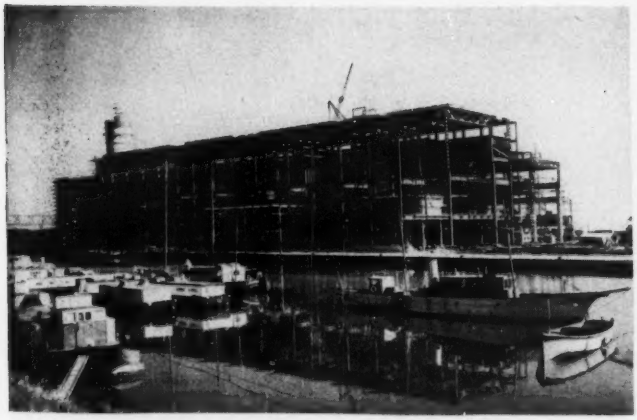


ONE OF FOUR new power stations being built by the British Electricity Authority is Brighton B station. This $42-million, 315,000-kw plant is located on the sea at Brighton, Sussex. Concurrent with construction of the station is enlargement of the harbor to allow ships to discharge coal directly for use in the plant

Lignite-Fired Plant to Be Built, Run by Texas P&L Co for Alcoa Smelter

A 240,000-kw, lignite-burning steam station will be built for Aluminum Co of America by Texas Power & Light Co to furnish power for a new smelting plant in Milam County, Tex., an Alcoa spokesman said last week.

Alcoa has applied to the Interior Department for a certificate of necessity to begin construction of the smelting plant soon at one of several alternate locations 60 mi south of Waco.

The utility will build and operate the power plant for Alcoa on a contract, rather than a rate, basis. Cost of the steam station, to be financed by Alcoa, is put at more than $30 million.

The aluminum smelting plant, which will be the first in history to be fueled by lignite, will have a capacity of 85,000 tons a year. It will be completed in 1952 and the power station sometime after that.

"Electricity rates are the crux of the whole arrangement," the Alcoa spokesman said. "We couldn't afford to buy power at TP&L's regular rates, and a Texas law forbids them to sell us power at a lower rate than they do to other industries. So we have arranged to have them run the plant for us on a contract basis."

He said Alcoa has always preferred to construct its own power plants, because in the long run, this meant cheaper electricity. But, he said, this has become more and more difficult in recent years, because of government restrictions on hydro developments.

"To build a steam plant and have someone else run it for us is a departure," the spokesman commented, "but it is still in line with our policy of supplying our own power whenever possible."

Use of the area's sub-bituminous coal as a source of low-cost fuel for both plants was made possible by Texas P&L, which sponsored an extensive research and experimental program, and by the U. S. Bureau of Mines, which operated a pilot plant near Denver, Colo.

Aside from the fact that it will be near large deposits of lignite, one of the considerations in locating the smelting plant in Milam County was that the power company will be able to supply interim power for partial operation of the smelter before the generating plant is completed.

Although all details of the contract have not been completed, the arrangement will provide for an interchange of power between the Alcoa-owned power plant and the utility to insure a firm supply for the smelter.

AEC Continues to Debate Industrial Atomic Energy

In considering a long-range program for conversion of atomic energy from research to industrial use, Atomic Energy Commission has two alternatives:

1. It may deal with one overall industry advisory committee, made up of representatives from the various industries which have a stake in the use of atomic energy for commercial purposes.

2. It may deal with several committees, organized on an industry basis, as recommended by the Sporn report (EW, July 2, p 59).

At a press conference last week, AEC Chairman Gordon Dean said no basic decision has been reached as to which of these approaches will be taken.

•

First Turbine Installed in France's Rhone Project

The first of six turbines has been installed at the Donzere-Mondragon hydroelectric development on the Rhone—France's equivalent of the TVA. Each turbine will feed a 50,000-kw generator. All six units are scheduled to be in operation before the end of 1952.

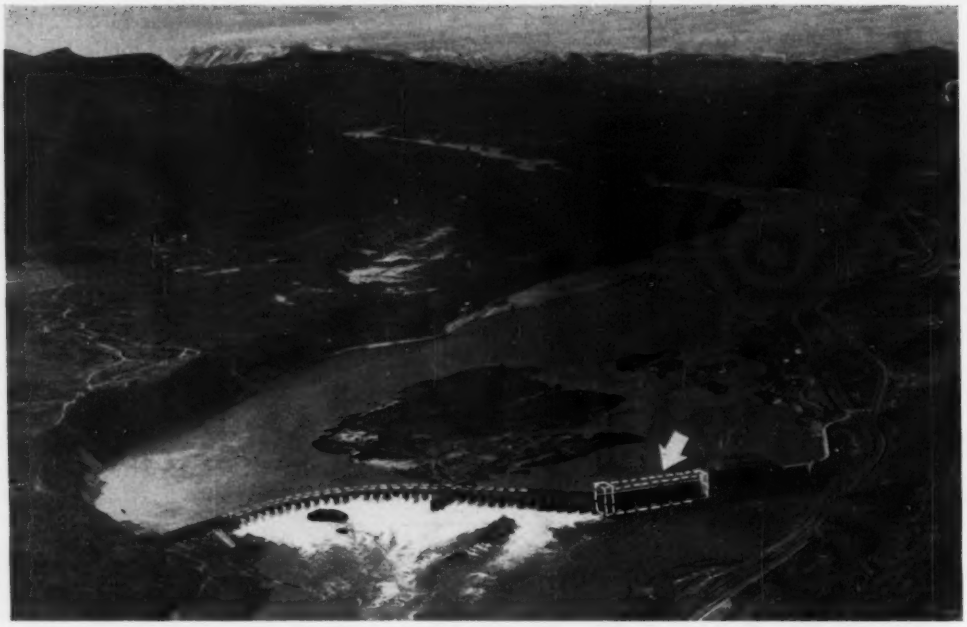
The 25-mi project, under construction since October, 1947, is the biggest of its kind in Europe. It is part of an overall Rhone development program which involves construction of more than 20 dams along the river.

World Output, 1950

The world produced 919 billion kwhr last year, 100 billion more than in 1949, figures released this month by the United Nations indicated.

The United States produced 42.2%, or 388 billion of this amount, including industrial generation. The Soviet Union was the second largest producer, with an estimated 90 billion. Canada came third with 56.6 billion and the United Kingdom fourth with 55 billion.

In 1920, the world total was only 126 billion kwhr. Of that amount, the United States produced 44.9%.



DOTTED LINES indicate plant addition under construction at Puget Sound Power & Light Co's Rock Island Dam across the Columbia River near Wenatchee, Wash. Six extra turbines and generators will be installed to produce an additional 150,000 kw. Most of the increased power will go to Aluminum Co of America's new plant upstream from the hydro station

House Tables St. Lawrence Seaway as Canada Threatens to Go It Alone

Even though it had a defense-priority tag, legislation providing for United States participation in a St. Lawrence Seaway Project appears dead for another year.

By a 15-12 vote, the House Public Works Committee last week decided to sidetrack the measure after long closed-door debate on a number of Seaway resolutions. Opponents said it would have been tabled much earlier if Chairman Charles A. Buckley, New York Democrat, had not persisted in keeping it alive.

In light of recently announced plans for September adjournment, it appeared unlikely that further committee action will be taken on the Seaway this year. On the Senate side, where the Seaway measures are in the hands of the Foreign Relations Committee, there is little inclination to discuss action until the Foreign Aid Bill is out of the way. And that will take up most of the time between now and planned adjournment date.

The House committee action revived a Canadian threat to go it alone if the U. S. does not cooperate. An all-Canadian seaway was given cabinet consideration last week in Ottawa.

Several Canadian government officials, including Prime Minister Louis St. Laurent, have spoken out against U. S. delay in the joint undertaking, implying they were giving thought to the all-Canadian project. A Canadian seaway would run entirely in Canadian waters, and could be undertaken without U. S. approval.

•

Rapids Case Shifted

Oral arguments in the Roanoke Rapids case before the Circuit Court of Appeals will be heard in Baltimore Sept. 5. They were originally set for Richmond Sept. 4.

Central Valley-BPA Tie Draws New Investigation

Interior Secretary Chapman has been ordered to report immediately whether his department is continuing to plan the Central Valley-Bonneville tie-line in defiance of the expressed wishes of Congress.

The latest demand was made by the House-Senate conference committee on Interior appropriations after Chapman had ignored a similar request made earlier this year by the House Appropriations Committee.

In a preliminary report submitted to the House last week, the conference group said it had received reports that Interior is working on the tie-line which Congress has prohibited. It called on Chapman to "submit immediately a full and complete report including disciplinary action taken by him in this case."

Witnesses testified last February before the House funds group that the Bureau of Reclamation, which is under Interior, has spent funds for surveys related to the lines.

Underground Plant Unit Put on Line in Algeria

One 33,000-kv unit of a large underground power plant near Kerrata, Algeria, has gone into operation. The plant is part of the $45 million Oued Agrioun hydroelectric project which by 1954 will supply 185 million kwhr a year—about one quarter of the French colony's requirements.

The project, now about half completed, includes three dams and two power plants. Iril Emda, largest of the dams, will have a capacity of 125,000 acre-ft on its completion next year. Water from this dam will be used twice to generate power. First it will pass through a power plant at the dam site, then flow 5.2 mi through a tunnel to the underground plant, 100 ft below the earth's surface.

The underground plant is 220 ft long, 56 ft wide, and 72 ft high. It has two 33,000-kw units and one 5,200-kw unit. The smaller power plant at the dam has two 12,000-kw units.

•

8-Story Headquarters to be Erected for BPA

All offices of the Bonneville Power Administration will be housed in a new eight-story building to be erected in Portland by the Lloyd Corp, which has extensive land holdings in Portland.

The $3 million building will occupy an area of 50 x 360 ft and will have 270,000 ft of floor space, all devoted to Bonneville departments. Adjoining the main building will be a two-story structure to house BPA technical laboratories. The four buildings now occupied by BPA will be used to centralize other federal agencies.

•

Broadcasts Scheduled

Farm electrification will be the theme of two broadcasts to be heard this month over national networks. They are "The Mohawk Valley, 50 Years Ago," with Edgar Bergen and talk by J. W. Parker, CBS Network, August 11, 2:30-3 PM (EDT); and "Redwing, Minnesota, 1923," talk by O. R. Doerr, vice president, Pacific Gas & Electric Co, ABC Network, August 25, 6-6:15 PM (EDT).

"STICKNEY LIBRARY" of lighting articles carried by "Electrical World" is still being added to by Phelps Meaker of the Engineering Division of the General Electric Lamp Department at Nela Park. The library was started in 1903 by George H. Stickney, lighting engineer and consultant, who retired in 1937 and is now living in Florida. He faithfully collected tearsheets of articles on lighting as they appeared in "Electrical World." Every year he would have them indexed and bound. Meaker has continued the work since Stickney's retirement. He is shown at the job

Compiling 'Cut-Off' List of Northwest Industries

Power distributors in the Pacific Northwest are compiling lists of industries whose power could be shut off next winter with the least harm to themselves, the economy of the area, and the defense effort in the event a severe power shortage should occur.

The lists have been requested by the Defense Electric Power Administration through C. A. Erdahl, public utilities commissioner at Tacoma, Wash., in his capacity as chairman of the Northwest Utilities Conference Committee.

First to be cut off would be the users of 300,000 kw of interruptible power, principally aluminum producers, unless defense conditions should make continued operation of aluminum plants essential. A reduction of as much as 300,000 kw of firm power would follow, if necessary.

Unusually warm weather this summer has caused an abnormal snow melt, leading to fears reservoir storage and stream flow during the fall and winter may be unusually low in the area.

•

Fire and Cave-in Slow Owens Gorge Project

Fire and a cave-in have slowed progress on the Los Angeles Department of Water & Power hydroelectric project on the Owens River Gorge near Bishop, Calif., both mishaps damaging tunnels.

Fire swept through 600 ft of inclined pipe at power plant No. 2 when a welding crew was at lunch. Damage was not considered serious.

The cave-in at Tunnel No. 1 occurred just after a swing shift crew had blasted a six-ft round in the tunnel face. No workmen were injured, but several days were required to make tunnel repairs.

Changes in Capacity Reported to Federal Power Commission

PLANT ADDITIONS DURING MAY

State	Utility	Plant	Fuel	Capacity (Kw)
Ohio	Arcanum Water & Electric Light Department	Millersburg	IC	750
Ind.	Southern Indiana Gas & Electric Co.	Ohio River	S	20,000
Ill.	Sullivan Light Department	Sullivan	IC	1,125
Mich.	Consumers Power Co.	Allegan	H	150
Wis.	Washington Island Electric Cooperative	Washington Island	IC	270
Minn.	Minnesota Power & Light Co.	M. L. Hibbard	S	33,000
Minn.	Northern States Power Co.	Wilmarth	S	12,500
Neb.	Deshler Municipal Utilities	Deshler	IC	360
Va.	Virginia Electric & Power Co.	Possum Pt.	S	60,000
N. C.	Carolina Power & Light Co.	Goldsboro	S	60,000
Ark.	Arkansas Power & Light Co.	Hamilton Moses	S	66,000
La.	Louisiana Power & Light Co.	Nine Mile Pt.	S	66,000
Okla.	Oklahoma Gas & Electric Co.	Shattuck	IC	500
Tex.	Central Power & Light Co.	Laredo	S	30,000
Colo.	Bureau of Reclamation	Estes	H	45,000
Colo.	Southern Colorado Power Co.	Rocky Ford	S	7,500
Colo.	Ft. Collins Light & Power Department	Ft. Collins	S	4,000
N. M.	Clayton Municipal Electric Department	Clayton	IC	1,730
Ariz.	Bureau of Reclamation	Davis Dam	H	45,000
Utah	Springville Municipal Power & Light System	Hobble Creek	H	300

PLANT RETIREMENTS DURING MAY

Pa.	Pennsylvania Power & Light Co.	Millersburg	S	4,250
Mich.	Consumers Power Co.	Allegan	H	200
Iowa	Sibley Light Department	Sibley	S	248
Neb.	Deshler Municipal Utilities	Deshler	IC	125
Md.	Eastern Shore Public Service Co of Maryland	Crisfield	S	925
Ark.	Arkansas Power & Light Co.	McGehee	IC	240
Okla.	Oklahoma Gas & Electric Co.	Alva	IC	675
Tex.	Lower Colorado River Authority	San Marcos	H	120
N. M.	Clayton Municipal Electric Department	Clayton	IC	80

H—Hydro, IC—Internal Combustion, S—Steam
United States Capacity as of June 1—Steam, 51,217,227 kw; Internal Combustion, 1,935,906 kw; Hydro, 18,193,811 kw; Total, 71,346,944 kw.

British Columbia Sticks to Libby Dam Demands

A showdown battle is planned by the British Columbia government with United States authorities over payments for water to be used in the proposed Libby Dam in Montana.

The 271,000-hp Libby Project would back up Kootenay water into a 42-mile lake in B. C. The province has demanded a one-third share in Libby output, instead of payment in dollars, as remuneration for water and storage rights based on loss of farm lands, timber losses, and other factors.

Objectors in the United States have declared the B. C. plan is out of the question and have suggested a cash payment, but George Melrose, deputy minister of lands for B. C., has declared the province will withhold consent unless its terms are met.

The provincial government stand is backed by British Columbia Electric Co, facilities of which serve two-thirds the population of the province. With Vancouver and Fraser Valley power demands increasing at the rate of 10% a year, the company expects its plants to be taxed to capacity within 15 years. It is suggested Libby power could be traded for Grand Coulee-Bonneville output in the Northwest Power Pool and fed north to Vancouver. At present BCE is exporting power to the Northwest, but this may end as home demands grow.

Interior B. C., served by the power commission and private plants, likewise is facing increased demands.

Provincial officials estimate the province actually is entitled to 41% of Libby power, and point out that by using the water twice more after it passes the dam, 700,000 to 800,000 hp can be realized.

•

Oregon Utility Offers Summer Job Scholarships

Nine electrical engineering students at Oregon State College are using their summer vacations to gain practical experience in the electric utilities industry through employment by Portland General Electric Co, Ore.

The students, recipients of summer job scholarships awarded by PGE after their selection by a joint committee of college faculty members and PGE represensatives, are assigned to diversified tasks.

The job-scholarship plan is a permanent feature, designed by the company to stimulate student interest in the possibilities offered by the electric utility industry as a career. Close contact is maintained with each student-engineer with a view toward possible future employment with PGE.

NEMA to Sponsor 1952 Merit Award Competition

Opening of the 1952 Merit Award Competition of the 4th International Lighting Exposition has been announced by G. T. Morrow, chairman of the Merit Award Committee. Both the exposition-conference and competition are sponsored by the Industrial and Commercial Lighting Equipment Section of the National Electrical Manufacturers Association.

Successful entries will receive 25 gold seal awards and merit award certificates and will be exhibited in the Court of Honor at the 4th International Lighting Exposition to be held in Cleveland May 6-9.

Entry blanks and rule booklets are available to electrical contractors, utility lighting and power representatives, electrical distributors' lighting specialists and salesmen, architects and consulting engineers, and owners and users of industrial and commercial lighting. Send requests to: Award Competition, 4th International Lighting Exposition and Conference, Room 818, 326 W. Madison St., Chicago 6.

•

Low Water at Hoover May Cut Power Output

Southern California Edison Co and Los Angeles Department of Water & Power have assured consumers that curtailment of power output from Hoover Dam will not have an appreciable effect on Southern California's power supply.

Bureau of Reclamation forecast a sharp drop in power output from Hoover Dam because of decreasing water runoff. The level of Lake Mead was the lowest this spring since 1947. E. A. Moritz, regional director of the Bureau, predicted the dam schedule will be about the same as during the 1946-47 period when annual generation was 4,258,777,621 kwhr. This would be a reduction in power from last year of 162,232,705 kwhr.

•

Prepares Plant Site

Gulf States Utilities is preparing a 253-acre site for a new plant one mile east of Scott, La. Construction will begin early next year. Initial capacity will be 66,000 kw, with three 100,000-kw units expected to be added later.

Here is L-M's complete line of type PHD
5 KV HEAVY DUTY CUTOUTS

8000 amperes interrupting capacity for 50 ampere cutout
14,000 amperes interrupting capacity for 100 ampere cutout
20,000 amperes interrupting capacity for 200 ampere cutout
1. standard duty door—1200 amperes interrupting capacity
2. heavy duty door—8000-5000 amperes interrupting capacity
3. switch blade door—100 amperes continuous current rating
4. standard duty door—3000 amperes interrupting capacity
5. heavy duty door—14,000-10,000 amperes interrupting capacity
6. switch blade door—200 amperes continuous current rating
7. heavy duty door—20,000-15,000 amperes interrupting capacity
8. switch blade door—400 amperes continuous current rating

Up to 20,000 amperes interrupting capacity

Interchangeable Doors—standard, heavy duty, and switch blade types—in each rating

50 and 100 ampere doors fit your present PVD® cutouts

Here is the first and only complete line of cutouts for high power capacity distribution feeders. These cutouts provide extra high interrupting capacity *as you need it*, without the extra cost for needless high *continuous* current rating. You can install one of these new L-M cutouts with standard duty door. As feeder load requirements change and fault currents increase, you can change it to a heavy duty cutout, in just six seconds, by hooking on the heavy duty door. Or change it to a disconnect switch—either stationary or indicating. Or you can change over your *present* PVD's! Warehousing and stocking are simplified, costs are cut.

PHD is a Line Material Co. trademark.

OUTSTANDING DESIGN FEATURES

- Housings wet-process porcelain, glazed inside and out.
- Hanger supports cemented into back of porcelain housings.
- All current carrying parts silver plated.
- New clamp type terminals with easily accessible large-head screws.
- Replaceable "bakelined" fuse cartridge tubes resist weathering and arcing.
- Spring-actuated flip-out device pulls fuse link down and out of tube, assuring instant separation of link parts, even with the smallest links, and low fault currents.

ENGINEERED FOR SAFETY—The lineman can remove the door completely, re-fuse and replace it, all with a switch stick. When door is open, all door parts are dead.

400 ampere disconnect switch in indicating position
Through the use of this new, higher-rated switch blade, the 200 ampere cutout can now be converted simply and quickly to a 400 ampere disconnecting switch for use on higher nominal current systems. Door can be closed with hinged blade in disconnect position below the box, giving positive indication that the line is open—a unique L-M feature.

L-M HEAVY DUTY CUTOUTS

RATING	DOORS AVAILABLE	INTERRUPTING CAPACITY rms amperes 2.5 kv*	5 kv**
50 AMPERES	1. Standard duty, indicating	1,200 amp.	1,200 amp.
	2. Heavy duty, non-disconnecting	8,000 amp.	5,000 amp.
	3. Switch blade	100 amperes continuous current rating.	
100 AMPERES	4. Standard duty, indicating	3,000 amp.	3,000 amp.
	5. Heavy duty, non-disconnecting	14,000 amp.	10,000 amp.
	6. Switch blade	200 amperes continuous current rating.	
200 AMPERES	7. Heavy duty, indicating	20,000 amp.	15,000 amp.
	8. Switch blade	400 amperes continuous current rating.	

* or line-to-neutral 4160 or 4330 volts Gr. Y. ** or line-to-neutral 8330 volts Gr. Y.

GET THE WHOLE STORY—Ask the L-M Field Engineer for complete information, and copy of Bulletin on PHD Cutouts; or write Line Material Company, Milwaukee 1, Wisconsin (a McGraw Electric Company Division).

55

LM

LINE MATERIAL . . . fuse cutouts

Complete Coordinated Equipment for Distribution Today

MISSOURI RIVER eventually demolished this H-structure carrying 66-kv line of Kansas City P&L Co. Utility rerouted power

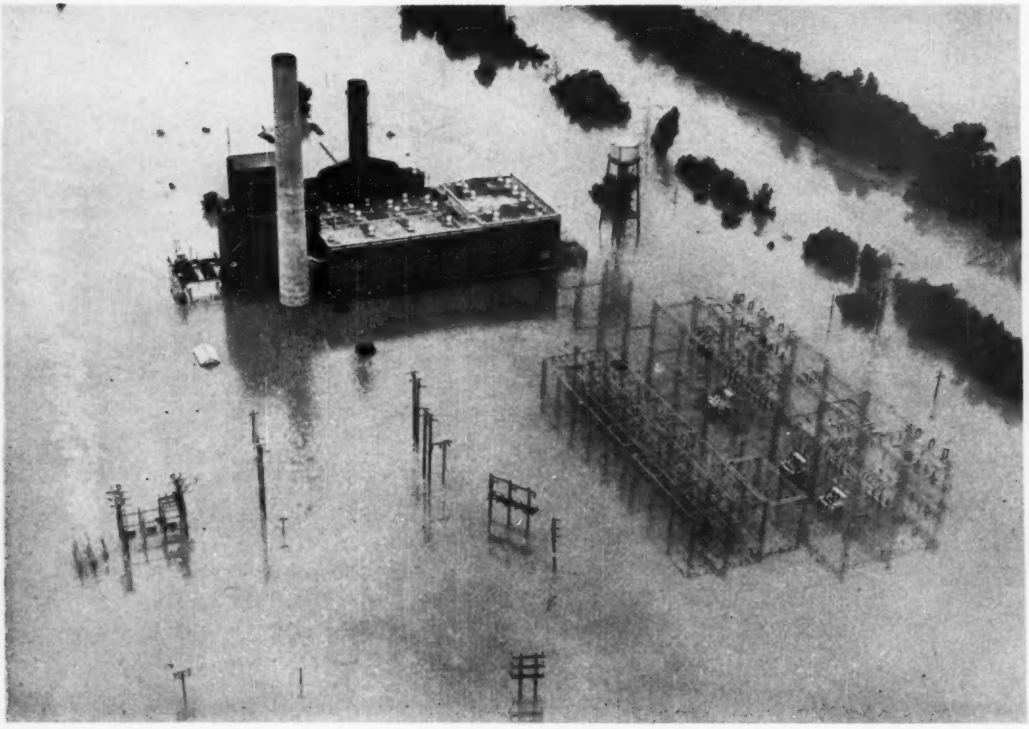
THREE HOURS after flood receded, KCP&L crews were at work repairing overhead system damage in city's fire and flood area

SYSTEM CONTROL center resembled a military GHQ as crews on Kansas City's system funneled in trouble reports on the flood

The Crews Used Everything but an Ark

DIKE OF COAL (right) kept the Tecumseh Plant of Kansas Power & Light in operation. Nearby substation could not be saved

UNION ELECTRIC Co troubleman emerges from barn loft after connecting up home freezer farmer put there to save his food



NEOSHO PLANT of Kansas Gas & Electric Co was largest knocked out by flood. Repairmen are still clearing up damage to the 48,000-kw installation, which had water seven feet above the turbine room floor. System's two other plants took over the load

Kansas and Missouri power system fared fairly well although floods reached new crests in Missouri Basin. Utility men had the answer: 'This time, we were ready.'

TROUBLE CALLS were dispatched quickly from the flooded area by this Union Electric Co boat crew, here shown using two-way radio set

FLOODED HOME in St. Louis area was one of many disconnected by linemen of Union Electric Co working in boats

Facts from NEW HAMPSHIRE

"8 Outages a month cut to zero with 'CSP®' Transformer"

"Until three years ago, we were having considerable transformer trouble due to lightning. 'CSP' Transformers proved to be our solution," reports a New Hampshire Utility.

"One particularly troublesome 2,400-volt conventional transformer required re-fusing about twice a week during the lightning season. One time the lightning arresters were actually blown up. We installed a 'CSP' Transformer and no outages have been experienced since."

Installation and maintenance costs for "CSP" (Completely Self-Protecting) Transformers are always lower, because complete protective equipment is built in, not separately mounted. A two-year survey of Electric Light and Power Companies shows the following:

NATIONAL AVERAGES

	"CSP"	Conventional
Installation Costs	$13.87	$24.74
Burn-out Rate	0.257%	1.005%
Fuse Outages	None	5.64% (at $6.52 per outage)
Load Checks	Automatic	12.8%
Breaker Reset	1.02%	None

If you'd like to check your own costs against these national averages, ask your Westinghouse representative for Booklet B-4247-B, "Transformer Costs and Their Relation to Profits". Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penna. J-70594-A

YOU CAN BE SURE... IF IT'S Westinghouse

"CSP" DISTRIBUTION TRANSFORMERS

British Columbia Studies Huge Hydro Project Site

Engineers of the British Columbia government now are studying a hydroelectric site on the Fraser River that may yield 1.5 million hp.

Site of the project's dam would be Moran, 170 miles from Vancouver and a short distance from the town of Pavilion.

E. C. Carson, minister of Public Works, revealed during a recent tour that Water Rights Branch engineers are studying the possibilities of a dam that would back up the Fraser into a 100-mile lake extending as far upriver as Quesnel. The dam would be in a narrow canyon where the Fraser runs hundreds of feet below the Pacific Great Eastern Railway.

While admitting that fisheries interests would probably object to the project, Carson asserted the plan would provide the largest power unit in the world.

MEETINGS

American Institute of Electrical Engineers
Pacific General Meeting, Multnomah Hotel, Portland, Ore., August 20-23; Fall General Meeting, Hotel Cleveland, Cleveland, Ohio, October 22-26.

Pacific Electronic Exhibit
Civic Auditorium, San Francisco, August 22-24.

Illuminating Engineering Society
National Technical Conference, Hotel Shoreham, Washington, D. C., August 27-30.

Northern California Electrical Bureau
Annual Exposition, Civic Auditorium, San Francisco, September 1-9.

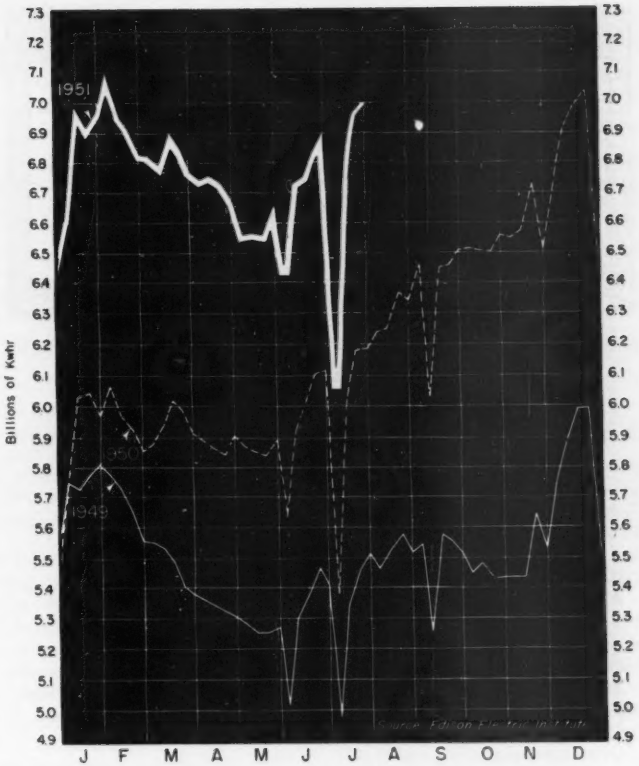
Rocky Mountain Electrical League
Fall Convention, La Fonda Hotel, Santa Fe, N. M., September 9-12.

Edison Electric Institute
Commercial Cooking Committee, EEI Headquarters, 420 Lexington Ave., New York, September 10-11; Prime Movers Committee, Statler Hotel, Buffalo N. Y., October 1-2; Meter-Service Committee, Purdue University, Lafayette, Ind., October 1-3; Electrical Equipment Committee, New Ocean House, Swampscott, Mass., October 8-9; Transmission-Distribution Committee, Sheraton Hotel, Rochester, N. Y., October 10-11.

Instrument Society of America
National Instrument Conference-Exhibit, Sam Houston Coliseum, Houston, Tex., September 10-14.

International Association of Electrical Inspectors
Southwestern Section, Hotel Lafayette, Long Beach, Calif., September 13-15; Northwestern Section, Hotel Davenport, Spokane, Wash., September 19-21; Western Section, Hotel Fontenelle, Omaha, Neb., September 25-27; Eastern Section, Hotel Claridge, Atlantic City, N. J., October 1-3; Southern Section, Hotel John Marshall, Richmond, Va., October 15-17.

Pennsylvania Electric Association
Annual Meeting, Benjamin Franklin Hotel, Philadelphia, September 18-19; Transmission-Distribution Committee, South Shore Inn, Northeast, Pa., October 11-12; Joint Relay-Communications Committee, Emerson Hotel, Baltimore, Md., October 18-19; Electrical Equipment Committee, Penn Alto Hotel, Altoona, Pa., October 22-23.



Output Week Ended July 28—7,005,261,000 Kwhr

Weekly Output, Millions Kwhr

1951	1950	1949
July 28 7,005	July 29 6,190	July 30 5,518
July 21 6,975	July 22 6,186	July 23 5,462
July 14 6,739	July 15 6,006	July 16 5,342
July 7 6,077	July 8 5,380	July 9 4,982
June 30 6,898	July 1 6,115	July 2 5,410
June 23 6,835	June 24 6,102	June 25 5,466
June 16 6,747	June 17 6,012	June 18 5,373
June 9 6,734	June 10 5,921	June 11 5,300
June 2 6,445	June 3 5,632	June 4 5,018
May 26 6,653	May 27 5,894	May 28 5,270

Percent Change from Previous Year

	July 28	July 21	July 14
New England	+ 6.8	+ 6.8	+ 6.8
Mid-Atlantic	+11.9	+11.9	+10.2
Central Industrial	+10.8	+ 9.5	+ 9.7
West Central	+14.5	+10.9	+ 9.0
Southeast	+12.4	+13.7	+14.9
South Central	+29.0	+28.2	+26.7
Rocky Mountain	+11.9	+13.4	+13.2
Pacific Coast	+13.6	+13.0	+11.2
Total United States	+13.2	+12.8	+12.2

Public Information Program
Annual Workshop Conference, Edgewater Beach Hotel, Chicago, September 20-21.

Wisconsin Utilities Association
Accounting Section, Plankington Hotel, Milwaukee, Wis., September 20-21.

Public Utilities Association of the Virginias
Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va., September 21-22.

American Society of Mechanical Engineers
Fall Meeting, Hotel Radisson, Minneapolis, Minn., September 25-28.

Iowa Utilities Association
Management Conference, Fort Des Moines Hotel, Des Moines, Iowa, October 1-2.

Southeastern Electric Exchange
Engineering-Operation Section Conference, John Marshall Hotel, Richmond, Va., October 4-5; Sales Conference, Roosevelt Hotel, New Orleans, La., October 31, November 1-2.

National Farm Electrification Conference
Annual Meeting, Hotel Gibson, Cincinnati, October 9-10.

National Electrical Contractors Association
Annual Convention, Shoreham Hotel, Washington, D. C., October 9-12.

Indiana Electric Association
Annual Convention, French Lick Springs Hotel, French Lick, Ind., October 10-12.

International Association of Electrical Leagues
Annual Conference, Roosevelt Hotel, New Orleans, October 10-13.

Association of Edison Illuminating Companies
Annual Meeting, The Greenbrier, White Sulphur Springs, W. Va., October 11-13.

National Association of Railroad and Utilities Commissioners
Francis Marion Hotel, Charleston, S. C., October 16-19.

National Electronics Conference
Annual Conference, Edgewater Beach Hotel, Chicago, October 22-24.

American Standards Association
Annual Meeting, Waldorf-Astoria, New York, October 22-24.

YIELDS (%) — Operating Electric Utility Securities

Quality	Bonds			Preferred Stocks			Common Stocks		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
DATE									
1951									
July 26	**2.90**	**2.95**	**3.10**	**4.10**	**4.30**	**4.67**	**5.53**	**6.23**	**7.07**
July 19	2.91	2.96	3.14	4.11	4.30	4.67	5.64	6.28	7.18
END OF QTR.									
2nd 1951	3.02	3.11	3.23	4.11	4.37	4.68	5.73	6.38	7.37
1st 1951	2.87	2.93	3.00	3.96	4.19	4.52	5.47	6.20	7.13
4th 1950	2.65	2.67	2.78	3.86	4.14	4.51	5.80	6.54	7.44
3rd 1950	2.66	2.67	2.76	3.81	4.08	4.46	5.70	6.54	7.25

Data: Reis & Chandler, Inc.

May Operating Revenues Rise; Net Income Drops

Electric operating revenues of the larger privately owned electric utilities in the United States in May were 9.8% above those for the same month a year ago, according to preliminary figures announced by the Federal Power Commission. Gross income was down 5.1% and net income decreased 10.3% for the month.

Revenue deductions of $341,995,000 (including operating expenses, depreciation, and taxes) were 13.3% higher than those for May, 1950.

May revenues amounted to $418,367,000 compared with $380,896,000 for May of last year.

Gross income, including other utility operating income, amounted to $87,071,000. Net income dropped from $67,965,000 for May, 1950, to $60,988,000 for May, 1951.

FINANCIAL BRIEFS

New York's Public Service Commission has rejected a request of Rochester Gas & Electric Corp for an 11½% increase in electric rates but has advised the company that it would be permitted a 6% increase on an interim basis if the company files new rates on the basis set forth in the commission's ruling.

Arkansas Public Service Commission has suspended a rate schedule filed by Arkansas-Missouri Power Corp to increase rates about 12%. The new rates would have been effective July 21, if not suspended, pending hearings by the commission on the utility's petition to make the proposed rates permanent. A joint hearing with the Missouri Public Service Commission may be held to discuss the request for higher rates.

Indianapolis Power & Light Co has reduced its rates $170,000, effective August, for 17,000 customers. Among those affected are 14,000 residential users with electric water heaters. The remainder are commercial and industrial power customers.

Gulf States Utilities Co plans to ask the city of Liberty, Tex., for a rate increase. The amount of the increase depends on the outcome of negotiations underway in Louisiana where the company has asked for a 20% boost. The company seeks uniform rates in Texas and Louisiana.

Central Vermont Public Service Corp has increased electric rates for residential and commercial customers. The boost will add $263,000 to the company's operating revenues.

Electric utility rates in New York State in 1950 decreased $550,000. Increases totaled $326,000. Rates for all utilities in the state showed a net increase of $29,386,000 compared with more than $31 million in 1949. Of the increase $23.5 million was for telephone service.

Residential submetering of electricity from Consolidated Edison Co of New York will be ended Aug. 31 in accordance with a ruling of New York's Public Service Commission. Restrictions on the expansion of industrial and commercial submetering, in effect in two of the city's five boroughs since January, were extended to the whole city last Tuesday.

South Carolina Generating Co of Columbia has received a state charter of incorporation. South Carolina Electric & Gas Co will hold most of the stock. The new company was formed in connection with the proposed construction of a new steam electric generating plant in the Columbia-Aiken area.

American Power & Light Co has asked the Securities and Exchange Commission to approve a cash distribution to stockholders of $2 a share in partial liquidation of the company.

Iowa Power & Light Co has placed 50,000 of 4.40% cumulative $100 par preferred stock with insurance companies.

Stockholders of United Gas Improvement Co have tendered 330,336 shares of the company's capital stock in exchange for shares of Philadelphia Electric Co and Consumers Power Co. This represents 91% of the 363,285 shares acceptable for exchange.

Nashville (Tenn.) City Council has authorized issuance of $7 million worth of bonds for Nashville Electric Service.

New England Electric System has asked for bids Sept. 14 for the purchase of all or part of its 14 gas subsidiaries in Massachusetts.

Voters in New England, N. D., have approved the sale of the municipal light plant to the Slope Electric Cooperative, Inc.

Electric Utility Financing—July 21-28

Company	Description	Amount of Offering (000)	Offering Price	Yield at Price to Public
Bonds				
Mississippi Power	1st mtg 3½%, 1981 new money	$4,000	100.929%	3.45%
Common Stock				
Pacific Power & Light	541,464 sh (250,000 sh new money)	7,716	$14.25	7.72
Montana-Dakota Utilities	162,838 sh, acquisition	2,768	17.00	5.29

SCHEDULED FOR FOLLOWING WEEK

Bonds—Central Vermont Public Service, 1st mtg "G", 1981 new money, $2 million.

Common Stock—Rochester Gas & Electric, 175,000 sh new money, $5.5 million.

IN THE INDUSTRY

KEN KOST

There was great rejoicing in the ranks of the private power industry in February 1950. Pacific Power & Light Co, Portland, which had been heading straight for the gates of public power, was kept in the fold of the investor-owned electric utilities (EW, Feb. 13, 1950, p 64). That rejoicing can continue because the Northwest utility has had a successful year. What is more, company officials have so much confidence in the future that they have gone into the market for new money to continue PP&L's expansion program.

An underwriting group headed by Lehman Brothers; Union Securities Corp; Bear, Stearns & Co; and Dean Witter & Co, is offering 541,464 shares of common stock at 14¼. Some of this stock (250,000 shares) is new money. It is being offered to present stockholders on 1-for-7 basis. The remainder (291,464 shares) is part of the block purchased by the A. C. Allyn & Co group over a year ago.

The original purchasers in the Allyn group also can do some rejoicing. They paid $9.28 a share. Last October they sold 1,078,744 shares at $13 with a reoffering to the public at $14. On the present offer the price to the group is $13.40.

Solid Reasons Drove Up Stock Price

There are some solid reasons why the price of the stock has been rising steadily. Since 1948 the operating revenues and earnings per common share have been increasing, operating expenses have been decreasing because the new Merwin hydro project has eliminated the need for much of the energy previously purchased. Here is the contrast between the figures for 1948 and those for 12 months ended last April 30: Operating revenues $16,045,871 and $18,837,847; earnings per common share 63¢ and $1.59; operations expense $8,385,654 and $7,441,499.

There has also been a great change in attitude in the front office since the company got its freedom from American Power & Light Co. The "toss-in-the-sponge" attitude has been replaced by that of the "future is bright." Construction budgets have been rising. In 1950 when it looked as if the company would end up in the hands of some public utility districts, the construction budget slumped to $5.5 million from over $8 million in each of the two previous years. The estimated figure for this year is just shy of $17 million. This is scheduled to jump to nearly $21 million in 1952.

Yale Project Will Take the Money

Much of this money will go into the Yale hydroelectric project on the Lewis River in Washington. The original installation will have 108,000 kw in two units with provision to double that capacity if necessary. The cost of the initial development will be over $26 million; so the company plans to float a $15-million mortgage bond issue in the early part of 1952. In the meantime the company is using some $16.1 million borrowed on a 3½% credit agreement with banks.

The great success of PP&L under private ownership and management should cause rejoicing in a nearby utility company territory. For the past six months (or more) there has been a campaign to sell Washington Water Power Co to a group of public utility districts. The arguments have been practically the same as those used when the "sell-out" of PP&L was proposed. Private power can't compete in the Northwest against public power. The only way to protect your investment is to sell to the PUD's. But the earnings of WWP also are increasing. For the 12 months ended May 31 they were considerably higher than those predicted by AP&L when it was trying to put through the sale to the PUD's. Once again let there be rejoicing among proponents of free enterprise. Keep Washington Water Power Co in the ranks of the investor-owned companies.

TECHNICAL NOTES

ARCHER E. KNOWLTON

Threading or welding pipe-hanger lugs to structural beams is less frowned upon than once was the case.

Wooden tool-handles will not shrink and loosen if saturated with a half-and-half mixture of glycerine and water

Combustion air for the boilers runs to such volumes that maintenance of comfortable working conditions, avoidance of heat loss, minimization of duct space and water-pipe freezing are not entirely solved for station design.

Dry cell flashlight batteries will last longer if stored in a refrigerator to avoid deterioration by heat and low humidity. Do not seal the container; "thaw out" before using.

City atmosphere in one area regularly or periodically contains 40 contaminants including 7 gases, droplets of 3 liquids, compounds of 25 metals, pollen, fibers, tarry organic material, and carbon particles. There may be fly-ash, too.

Static-discharge fire hazards have been eliminated in a vinyl film printing process by the alpha-rays emitted by a bar of polonium placed within an inch of the firm.

Radiation of 65 megacycle energy from the sun's ionosphere is 75% cut off during total eclipse by the moon.

Transmission at higher than present voltages might be feasible even during adverse weather if a satisfactory wetting agent would prevent droplets and the consequent corona.

Busbar cost of energy is a rat-race; increases in cost of fuel, labor, and materials have offset the technologic gains of three decades.

Rotor preheating is undoubtedly prolonging the life of older generators but it should not be necessary in new alternators to prevent distortion and turn separation.

NEWS ABOUT PEOPLE

Shawinigan W&P Makes Way a Vice President

Shawinigan Water & Power Co. Montreal, has appointed William R. Way vice president in charge of generation and transmission. He has been general superintendent of the company's generation and transmission department.

W. R. WAY

Way succeeds John Morse who is retiring after 44 years with Shawinigan. Replacing Way as general superintendent is J. M. Sharpe.

In other appointments, E. W. Knapp, former superintendent of the system planning division, has been named chief electrical engineer, and A. L. Hough has been made assistant general superintendent. Hough has been assistant to the general superintendent. J. M. Crawford has been promoted from assistant superintendent to superintendent of system planning succeeding Knapp and Joslyn A. Smith from assistant superintendent to superintendent of the system operating division replacing Sharpe. Donald King, system operating engineer, has been named assistant superintendent of the system operating division.

Way joined Shawinigan 33 years ago as assistant engineer in the operating department at Montreal. He served in the protection, metering, and hydraulic test divisions. In 1924 he went to Shawinigan Falls as chief system operator. Six years later he returned to Montreal and served successively as assistant superintendent of operation, superintendent, assistant general superintendent, and in 1944, general superintendent.

Sharpe, superintendent of the system operating division since 1945, has been with Shawinigan since 1925. He went to the system operating office in 1928 and later became chief system operator and then system operating engineer before becoming superintendent of the division.

Starting as a draftsman with the Canadian utility in 1907, Morse was made superintendent of operations four years later. He became general superintendent in 1916, assistant general manager in 1938, and in 1940 was elected a vice president.

•

Herbert R. Frankel, formerly a director and vice president of Corporate Intelligence, Inc, publisher of the "Utility Spotlight," has joined the staff of "Electrical World." He will be assistant to Editor Fischer S. Black. Frankel worked at Edison Electric Institute, 1947-1949. Previously he had been associated with Commonwealth & Southern Corp for 18 years, interrupted by three years in the Army where he was a major.

Vern H. Lear, general superintendent of Central States Electric Co and Iowa Electric Co, Cedar Rapids, Iowa, has been appointed assistant to the president of the two utilities. **T. D. Robinson,** formerly superintendent of distribution and transmission, has been named superintendent of the electric operating department of the firms.

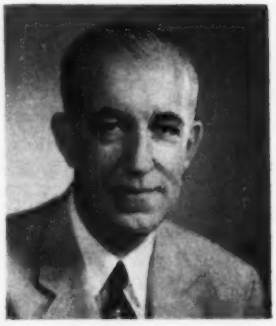
F. T. Sagemiller has been named assistant to the production control manager of Allis-Chalmers Manufacturing Co's general machinery division at the West Allis Works. He succeeds **F. C. Butler** who has resigned. With the company since 1936, most recently Sagemiller has been engaged in setting up a production control department at Allis-Chalmers Rumely, Ltd, an A-C subsidiary.

Applegate Is President of Hartford Electric Light

(*See Front Cover*)

Kenneth P. Applegate is the new president of Hartford Electric Light Co (EW, July 9, p 3). He succeeds Austin D. Barney who has been named chairman of the board.

In other executive changes John R. Donahue, director of public information, has been appointed a vice president and William S. Barker, assistant to the executive vice president, has been named general manager of the utility.



J. R. DONAHUE

Applegate, executive vice president of Hartford Electric since 1946, started with the company in 1912 as an electrical engineer. He later became a power salesman, and in 1916 was made purchasing agent. Thirteen years later he was appointed general manager and in 1943 vice president.

Donahue, former newspaperman and special assistant to the tax commissioner of Connecticut, joined the utility's legal department in 1935. In 1946 he was placed in charge of the company's public relations department. A reserve officer in the Army during World War I, Donahue was state quartermaster general for four years, and also served on the governor's military staff for six years.

Beginning in Hartford Electric's

(*Continued on page* 27)

Here's where you use

SUPER CORONOL*-GEOPRENE

Power Cable

- ***Aerial or Underground Transmission and Distribution Systems***
- ***Station and Apparatus Circuits***
- ***Mine Power Circuits***

Wherever your schedule calls for high-voltage non-metallic cable, make General Electric Super Coronol-Geoprene power cable your choice for all-round service. Where operating conditions demand exceptional resistance to ozone, heat and moisture, Super Coronol's insulation provides extra-long service life.

And, the specially compounded Geoprene jacket gives additional protection against sunlight, oils, soil acids and alkalies, and flame.

The sturdy Geoprene jacket is far tougher than any natural rubber jacket and will take mechanical abuse during and after installation. Yet, Super Coronol-Geoprene cable is lighter, more flexible than metal-clad types—is easier to handle, easier to install.

Where temperatures run high, choose Super Coronol-Geoprene cable. It permits high current-carrying capacity and small conductor sizes because of its high temperature rating.

Wherever you meet high-voltage cable applications, think first of G-E Super Coronol-Geoprene power cable.

*Registered Trade Mark of General Electric Company

Get further application and specification data from this Super Coronol-Geoprene Power Cable booklet. You'll also get test data plus splicing and terminating information. Just fill in the coupon and mail it today for your free copy.

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Construction Materials Division
General Electric Company, Bridgeport 2, Conn.

Please send a free copy of the Super Coronol-Geoprene Power Cable booklet to:

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You can put your confidence in—

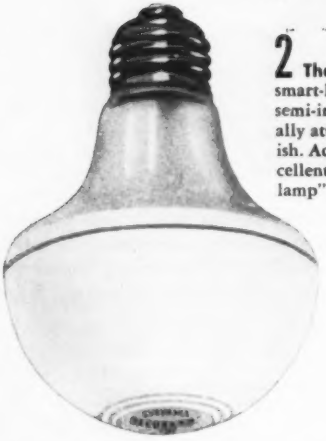
GENERAL ELECTRIC

Brighten Summer Sales with these SMART NEW SYLVANIA LAMPS

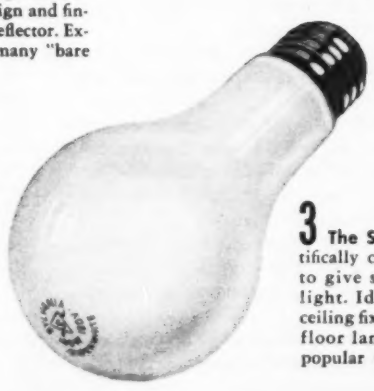
3 Special-purpose bulbs to bring EXTRA PROFITS!

In variety as well as quality, you'll agree, Sylvania is a lighting leader. Just see how Sylvania helps you get extra business now with these bright special bulbs.

1 The Kitchen Lite . . . a 150-watt bulb in regular 100-watt size. Fits all standard fixtures. Brings more light to kitchens, laundries, garages, playrooms and workrooms. A brilliant sales idea!



2 The Decorator Lamp . . . a smart-looking 50-watt lamp for semi-indirect lighting. Unusually attractive in design and finish. Acts as its own reflector. Excellent solution to many "bare lamp" problems.



3 The Superwhite . . . scientifically coated inside the bulb to give soft, evenly diffused light. Ideal for dining-room ceiling fixtures, table lamps, and floor lamps. Available in all popular wattages.

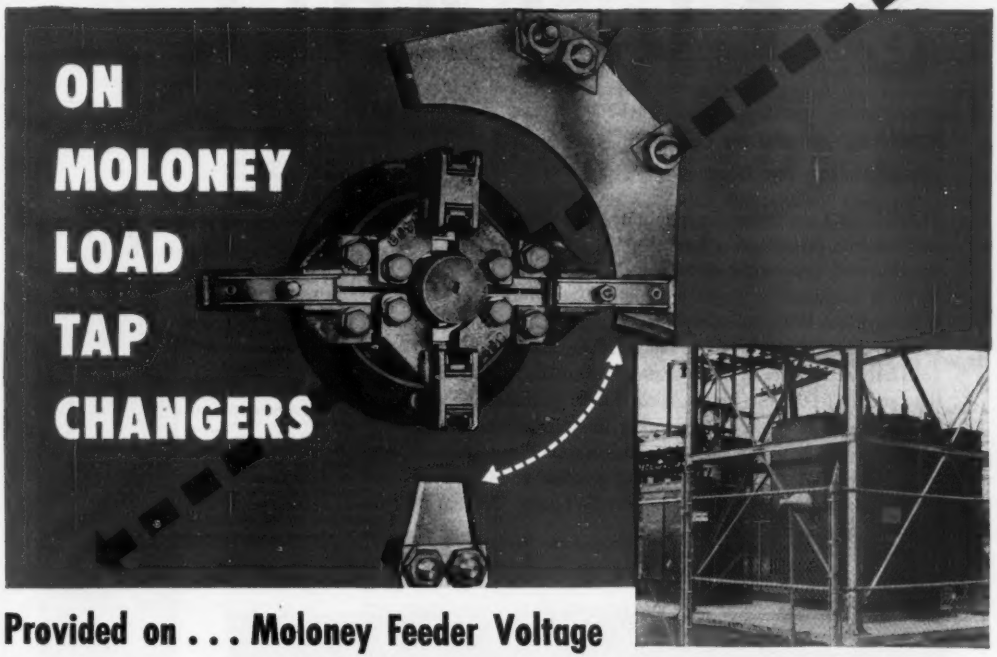
Make sure you include these 3 Sylvania sales boosters in your next order.

SYLVANIA

Sylvania Electric Products Inc., 1740 Broadway, N.Y. 19, N.Y.

LIGHT BULBS; FLUORESCENT TUBES, FIXTURES, SIGN TUBING, WIRING DEVICES; RADIO TUBES; TELEVISION PICTURE TUBES; ELECTRONIC PRODUCTS; ELECTRONIC TEST EQUIPMENT; PHOTOLAMPS; TELEVISION SETS

GREATER ARC CLEARANCE...



Provided on . . . Moloney Feeder Voltage Regulators • Regulating Transformers • Load Ratio Control Transformers

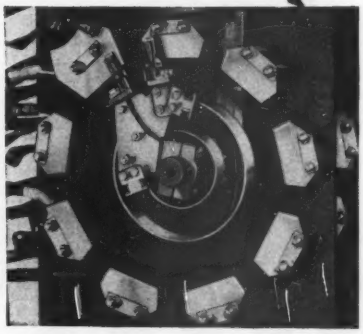
Load Tap Changers, provided on all Moloney Feeder Voltage Regulators, Regulating Transformers and Load Ratio Control Transformers, feature a Load Transfer Switch which relieves the Tap Selector Switch of all arcing duties and results in greatly increased arc interrupting capacity.

Use of the separate Load Transfer Switch permits longer arc clearances to be maintained since arcing duty is confined to but two stationary contacts per phase. This is in contrast to the nine stationary contacts per phase which are subject to arcing on regulators which require the Tap Selector Switch to break the load current.

This feature of the Moloney Load Tap Changer, along with the use of by-pass switching reactors, permits tap changing on a larger Kva load without increasing the physical size of the Load Tap Changing equipment. Maintenance costs are also reduced since arcing is eliminated from the Tap Selector Switch.

MEB1-14

NO ARCING HERE...



No arcing duty is imposed upon any of the tap selector switch contacts, avoiding the necessity for replacement due to burning or scoring. Contacts are of hardened *copper alloy* to minimize frictional wear.

MOLONEY ELECTRIC COMPANY

Manufacturers of Power Transformers • Distribution Transformers • Load Ratio Control Transformers • Step Voltage Regulators • Unit Substations

SALES OFFICES IN ALL PRINCIPAL CITIES • FACTORIES AT ST. LOUIS, MO. AND TORONTO, ONT., CANADA

V.C. CABLE

Roebling Varnished Cambric is your A-1 specification for heat resistance

YOU'LL GET maximum dependability... you'll save real time and money... by adopting Roebling V. C. Cable as leads for transformers, generators, motors and oil switches... Roebling V. C. is furnished in single conductor sizes from 2,000,000 C.M. to #14 A.W.G.; in multiple conductor sizes from 750,000 C.M. to #14 A.W.G. It is recommended for use up to 17,000 volts between phases in single or multiple conductor construction; and to 26,000 volts for single conductor grounded neutral.

A big share of Roebling's complete line of electrical wires and cables is required today in the nation's rearmament program, but we shall do everything possible to meet your requirements. John A. Roebling's Sons Company, Trenton 2, New Jersey.

Manufactured with solid conductors or stranded in a variety of strandings, coated or uncoated, according to your needs. Available in single or multiple conductor.

Insulated with varnished cambric tape, in accordance with I.P.C.E.A. and Underwriters' specifications unless otherwise specified by you.

For outside covering you have a choice of braid, for service in dry locations; lead, for service in damp locations; and for aerial use or direct burial we recommend a protective armor such as steel tape or galvanized round wire armor.

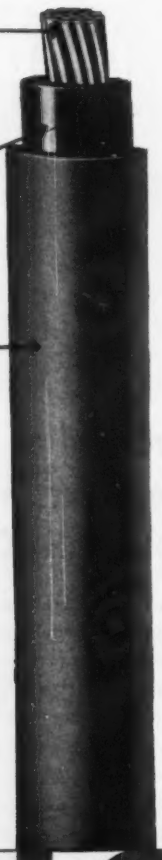
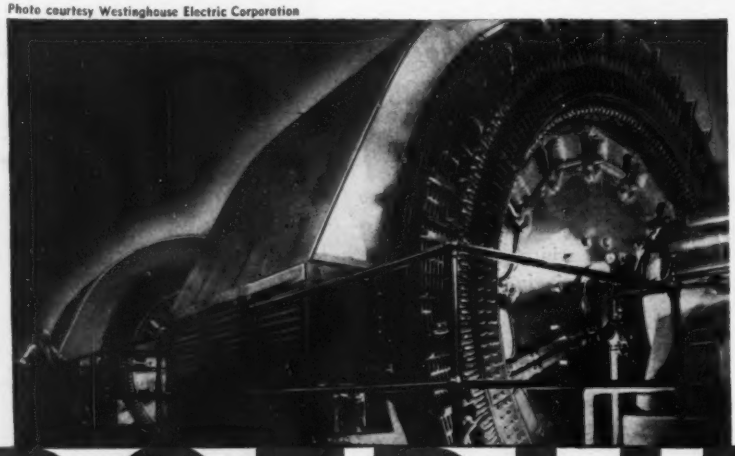


Photo courtesy Westinghouse Electric Corporation



ROEBLING

Atlanta, 934 Avon Ave ★ ***Boston,*** 51 Sleeper St ★ ***Chicago,*** 5525 W. Roosevelt Rd ★ ***Cincinnati,*** 3253 Fredonia Ave ★ ***Cleveland,*** 701 St. Clair Ave, N.E. ★ ***Denver,*** 4801 Jackson St ★ ***Detroit,*** 915 Fisher Building ★ ***Houston,*** 6216 Navigation Blvd ★ ***Los Angeles,*** 216 S. Alameda St ★ ***New York,*** 19 Rector St ★ ***Odessa, Texas,*** 1920 E. 2nd St ★ ***Philadelphia,*** 230 Vine St ★ ***San Francisco,*** 1740 17th St ★ ***Seattle,*** 900 1st Ave, S. ★ ***Tulsa,*** 321 N. Cheyenne St ★ Export Sales Office, ***Trenton, N. J.***

News About People

(*Continued from page* 22)

purchasing department in 1917, Barker became purchasing agent of the company in 1929. For the past year he has been assistant to the executive vice president.

•

General Electric Names 5 to Engineering Posts

General Electric Co has made several new appointments in its Fractional Horsepower Motor Engineering Divisions at Fort Wayne, Ind.

J. Herbert Behm has been named assistant to the manager of engineering on special assignments; Lee R. Beard, division engineer of the ac motor engineering division; Ray D. Jones, division engineer of the development engineering division; and I. E. Ross, division engineer of the dc and specialty motor engineering division.

Behm, who has been division engineer of the ac motor engineering division, joined GE's test course at Schenectady and shortly afterwards was assigned to the FHP Motor Engineering Divisions. He later served as assistant division engineer in the aircraft and ac motor divisions.

Beard was division engineer of the development engineering division prior to his recent appointment. He has been with the company since 1930. Jones began as a test engineer with GE in 1925. He later was assigned to the FHP Motor Divisions. He has been working on all phases of small motor engineering.

Ross, former staff member in the radiation laboratory of Massachusetts Institute of Technology, came to General Electric in 1948 and had charge of FHP Aircraft engineering at Fort Wayne. He previously had worked for Victoria Electric Products, Cincinnati, as chief engineer.

An earlier appointment in the division was that of Carl W. Moeller as assistant to the manager of engineering. With GE since 1935, he served most recently as division accountant for the company's Switchgear Divisions.

•

Col Alfred H. Davidson has been assigned as New York District Engineer, Army Corps of Engineers, succeeding **Col E. P. Ketchum** who has retired. Davidson entered active duty in the corps in 1940 as a captain serving in the European Theater of Operations. He also has served as assistant to the Louisville District Engineer, and chief of the Repairs and Utilities Division of the Office of the Chief of Engineers.

Frank A. Newcombe has been named president of Larkin Lectro Products Corp, Pine Bluff, Ark. He formerly was manager of Westinghouse Electric Corp's plant at Little Rock.

OBITUARY

William C. Johnson

William C. Johnson, 49, executive vice president of Allis-Chalmers Manufacturing Co, died at Milwaukee July 26.

Johnson had served as executive vice president in charge of the firm's general machinery and tractor divisions since February of this year.

W. C. JOHNSON

His association with Allis-Chalmers began in 1924 when he joined the company as a machinist's helper. During the next five years he worked in the field service and erection department.

In 1929 Johnson was named representative of the firm's crushing and cement division in the Atlanta district. Six years later he became general sales representative at Chattanooga, Tenn. In 1937 he opened the company's district sales office in Knoxville, Tenn.

Returning to Milwaukee in 1940, Johnson was appointed sales manager of Allis-Chalmers' crushing and cement department. Two years later he was made general sales manager of the general machinery products.

In 1944 Johnson was elected vice president of the general machinery division and three years later was appointed executive vice president in charge of that division. Following the death of Pres Walter Geist earlier this year, he became executive vice president of the tractor division also.

•

Frank Ryan, 62, assistant to the vice president for production at the Manville plant of Johns-Manville Corp, died July 25 at Dover, N. J. With the company since 1906, he served successively as storekeeper, purchasing agent, office manager, production manager, assistant general manager, industrial relations manager, and finally assistant to the vice president for production at the Manville plant.

L. E. Johnson, district sales manager of the Wire and Cable Division of Copperweld Steel Co, died recently. He was in charge of the company's Dallas office and had been with Copperweld since 1940. He previously had worked for Texas Electric Service Co and Texas Power & Light Co.

Harry E. Huff, 60, manager of the Niagara sales district of General Electric Co's Lamp Division, died July 15 at Buffalo, N. Y. A veteran of 42 years of service with GE, Huff had been manager of the Niagara sales district since its formation in 1948.

John A. Lloyd, 56, former engineering supervisor for Louisville Gas & Electric Co, died recently at Denver, Colo. He served the utility for 35 years before retiring two years ago.

Gust T. Karlsten, 66, stationery engineer with Northern States Power Co for 33 years, died July 16 at Minneapolis.

James V. Morris, 68, night engineer for 27 years at the Garland, Tex., municipal power plant, died July 15 at Garland.

Emil Broetler, former city supervisor of electric service at Milwaukee, Wis., died in that city July 20.

MANUFACTURERS and MARKETS

Sylvania's Net Sales Up 70% During 1st Half

Sylvania Electric Products, Inc, has reported that net sales during the first six months of the year exceeded those for the first half of 1950 by 70%. The figures were $103,822,579 for the first half of 1951 compared with $61,086,101 for the corresponding period a year ago.

Net earnings during the half totaled $5,680,670, more than twice the $2,259,453 for the first six months of 1950.

Earnings per share on the 1,856,550 shares now outstanding were equal to $2.95 after payment of preferred dividends compared with $1.41 a year ago on the 1,456,550 shares then outstanding.

Second quarter sales also set a new high. They were $43,191,494 compared with $31,738,190 for the second quarter of 1950, an increase of 36%. Earnings for the quarter were $2,165,515, more than double the $1,033,609 for the second quarter of 1950. Earnings per share were $1.11 compared with 64¢ on 400,000 fewer shares at the end of the second quarter last year.

•

Westinghouse Will Build Large Liquid Rheostats

Westinghouse Electric Corp plans to build liquid rheostats, the largest in the world, at its Buffalo plant to help test full-size jet engines, guided missiles, and wing sections and fuselages of aircraft.

The rheostats will be used to regulate the speed of large electric motors at a new wind tunnel at the Arnold Engineering Development Center in Tullahoma, Tenn. They are part of $20 million worth of electrical equipment which Westinghouse is building for the new project.

Each liquid rheostat will be more than 20 ft high and will consist of three nine-ft-high tanks in which an alkaline solution will be circulated. At the bottom of each tank will be a stationary nickel-clad steel plate or electrode. A similar electrode will be attached to a movable plunger-like support at the top of the tank. Current will pass from one electrode to another through the alkaline solution.

As the top electrode is lowered, the flow of current is increased, thus speeding up the motor. Pulling the plates farther apart cuts down the current flow and the motor speed. The three moving electrodes are hooked up together so the three tanks operate as a single unit.

Two of the motors in this installation will be the most powerful ever built, exceeding the 65,000-hp rating of the Westinghouse motors built for Grand Coulee Dam in Washington.

FARM MOTOR, built by Westinghouse 48 years ago, is still in operation on a dairy farm near Little Falls, N. Y. The 50th anniversary of the beginnings of farm electrification was recently celebrated at the upstate New York town

Metal Prices
July 30, 1951

COPPER, Conn. Y, lb	$ .24½
LEAD, N. Y., lb	.17
ZINC, prime Western, E. St. Louis, lb	.17½
TIN, Straits, quel. N. Y., lb	1.06
ALUMINUM, ingot, base price	.19
NICKEL, base price	.59½
STEEL billets, Pitts., ton	56.00
STEEL, scrap, No. 1 heavy, Pitts., ton	45.00

MANUFACTURING BRIEFS

World production of tin contained in concentrates increased to 15,600 long tons during May compared with 14,500 tons in April, according to the International Tin Study Group. Higher production during May was recorded in all important producing countries. Production of refined tin throughout the world during May totaled 14,400 long tons compared with 14,600 tons in April.

A slight decline in refrigerator trade-ins during the last half of 1950 accompanied by an increase in the number of consumers keeping old boxes, may indicate a trend to "two refrigerator families," results of a consumer refrigerator survey conducted by Hotpoint, Inc, show. According to survey figures, replacement sales jumped to approximately 80% from a norm of 50% following the Korean outbreak. Average age of refrigerators replaced during 1950 was 13.7 years with sharp increases at the ten and 15-year levels.

Westinghouse Electric Corp laid off 400 employees during July at its Mansfield, Ohio, plant. The lay-offs were attributed to a shortage of materials and easing in consumer demand. The plant manufactures refrigerators and other major appliances.

A motion picture which tells the complete story of electric water heating has been released by General Electric Co's Water Heater Division. The 25-minute, black and white, 16-mm film is being made available for use at cooking schools, men's and women's clubs, and home economics classes as well as sales clinics. It is designed to help train salesmen and to give information to home owners who need aid in solving their water heating problems.

Reynolds Metals Co has put a fifth potline into operation at its Jones Mill plant, near Hot Springs, Ark. The

new potline will increase the plant's annual production by 42 million lb to a total of 186 million lb.

Babcock & Wilcox Co has increased the price of seamless and welded austenitic stainless steel tubing and other tubular products containing nickel in excess of 5% by 6¢ a lb. The boost is attributed to the increased cost of nickel.

International Nickel Co has developed a nickel-saving alloy for use under conditions of high temperature and corrosion. The alloy, trade-name "incoloy," contains about 35% nickel, 20% chromium, and the balance iron. It is produced in most standard rolling mill forms, including sheet, strip, rod, wire, and tubing. The alloy is designed for many purposes now served by some of the company's older alloys which use up to 70% nickel.

Metalcraft Products Co, Inc, Philadelphia manufacturers of Magna-Lite fluorescent and slimline luminaries, has moved to a new plant in the same city at Mascher and Lippincott Streets. The new quarters are double the size of the company's former plant.

SALES ASSIGNMENTS

COMPANY STAFFS

Worthington Pump & Machinery Corp, Harrison, N. J., has placed L. M. Evans in charge of its new branch office at Rochester, N. Y. The office is located at 1246 Sibley Tower Building. Evans has served the company as an assistant test engineer and general line estimator and representative in St. Louis, Buffalo, and Syracuse.

General Electric Co has appointed L. Maynard Stauffer manager of its Rocky Mountain apparatus district. The district, with headquarters in Denver, includes Utah, Colorado, Wyoming, and parts of Montana, Idaho, Nevada, New Mexico, South Dakota, and Nebraska. Stauffer has been manager of the district's Salt Lake City office.

International Rectifier Corp has opened a Chicago district sales and engineering office at 205 West Wacker Drive. L. W. Phinney has been appointed district manager.

REPRESENTATIVES

Daybrite Lighting, Inc, St. Louis, has named the newly formed firm of Ruff & Cannon, 152 Nassau Street, Atlanta, as its representative in Georgia, Alabama, and east Tennessee.

NEW ELECTRICAL CONSTRUCTION

A weekly selection of U. S. electrical construction projects announced by private and government utility systems involving more than $70,000. Also listed are major industrial and construction jobs where electrical work is indicated or implied

UTILITIES

Proposed Construction

Ark., Jonesboro—City, Jonesboro, city light and power plant addns., $1,000,000.

Colorado—Yampa Valley Electric Assn., Steamboat Springs, 345 mi. electrical distr. lines, 36 miles of new tie line, substations, etc. 36G-H Routt, $2,900,000.

D. C., Wash.—General Services Admin., P. Bldg. Service, Wash., D. C., furnishing and installing turbo-generator educational unit and electric and hydraulic dynamometers in new engineering bldg. at Howard University.

Idaho—Fall River Rural Electric Cooperative, Ashton, Idaho, 10 miles of rural distr. lines, 25 mi. transmission lines 1 mi. tie line substations, two way radio and completion of previously approved construction. $360,000. C. C. Davidson, c/o owner, Ashton, consult. engr.

Iowa—Glidden Rural Electric Co-operative, Glidden, 40 mi. rural distr. lines, 24 mi. tie lines, sub-stations, Carroll Co. $310,000. Stanley Eng. Co., Hershey Bldg., Muscatine, consult. engr.

Kansas—Radiant Electric Co-operative, Fredonia, 75 mi. rural distr. lines, in Wilson Co. Flora Eng. Co., 1717 E. Colfax Ave., Denver, Colo., engr.

Mass., Holyoke—City, Gas & Electric Dpt., 70 Suffolk St., light and power plant gas works, River Bank, $150,000, Luke L. Nakashian, 31 St. James Ave., Boston, consult. engr.

Mich., Bay City—City, George MacPhail, mgr., Contr. 3, superstructure 1 story, 22x 55 ft., brick, rein.-con. sub-station, Contr. 4, erection transformers, transformer tower, accessories. Plans deposit Contr. 3, $20, Contr. 4, $10. Ayers, Lewis, Norris & May, 500 Wolverine Bldg., Ann Arbor, engrs.

Mich., Boyne City—Northern Michigan Electric Co-operative, Boyne City, Sect. 7, electrical work for advance steam plant, Stanley Eng. Co., Hershey Bldg., Muscatine, Ia., engr.

Missouri—North Central Missouri Electric Co-operative, Milan, 170 mi. rural distr. lines, 17 mi. tie lines and communication facilities, Sullivan Co. $345,000. Frank Horton & Co., Lamar, consult. engrs.

N. M., Los Alamos—U. S. Atomic Energy Comm., Los Alamos, plans by Kistner, Curtis & Wright, 3161 Wilshire Blvd., Los Angeles, Calif., 1 story 70x153 ft., warehouse bldg., 30x112 ft., service station; 57x62 ft. fire station, 13x13 ft., guard station, all monolithic concrete; 2 15x48x 15x18 ft. storage bldgs., wood frame and transite siding, all 1 story, incl. clearing, grading, paving, site imprvs. and utilities, incl. water, sewer, power, steam lines, Inv. 291-52-2. $825,000-$925,000.

N. C., Greenville—Greenville Utilities Comm., Martin Swartz, supt., 242 mi. rural distr. lines, Beaufort, Craven and Pitt Counties. Plans deposit $10. L. E. Wooten & Co., 206 S. Dawson St., Raleigh, engrs.

Wash., Wenatchee—Chelan Co. Public Utilities Dist. c/o Stone & Webster Eng. Corp., engrs., 49 Federal St., Boston, Mass., 80 ton electric gantry crane for expansion of Rock Island Dam.

Low Bidders & Contracts Awarded

Ala., Huntsville—The Whaley Co., 6424 1 Ave. No., Birmingham, Ala. Contract Awarded, $267,000, outside electric distr. sys. Dpt. Army, Redstone Arsenal, Huntsville, Ala.

Del., Dover—Arrow Electric Co., 116 W. St., Wilmington, Del. L.B. $84,938. lighting Dover Air Force Base. U. S. Eng., 121 N. Broad St., Phila. 1, Pa. Bids June 29.

Ia., Bellevue—Worthington Pump & Machinery Co., 401 Worthington Ave., Harrison, N. J., Contract Awarded, $119,460. diesel engine generating unit, auxiliaries and appurtenances. City, Dr. John J. Tillon, mayor, Bellevue, Ia. Federal Eng. Co., Putnam Bldg., Davenport, Ia., engrs. Bids June 26.

N. J., Fort Dix—Edward H. Ellis & Sons, Route 40 and Harvard Ave., Merchantville, N. J., L.B. $1,440,502. McGuire Air Force Base, roads, sewers, electric power distr. Dpt. Army, 121 N. Board St., Phila., Pa.

Ore., Eugene—E. E. Settergren, Henry Bldg., Portland, Ore. L.B. $183,300. concrete warehouse. Eugene Water & Electric Bd., City Hall, Eugene, Ore. Bids July 6. Ralph C. Beardsworth, 166 E. 11 St., Eugene, Ore., archt.

Tex., San Antonio—City Public Service Board, 201 N. St. Mary's St., Force Account. $150,00. addnl. unit of street lighting sys.

Washington, Idaho, and Montana—Electric Constr. Co., 1650 Center St., Tacoma, Wash., LB $1,291,488, Inv. 5925 constr. 86.8 mi. Spokane-Hot Springs 230 kv line. Bonneville Power Admin, 827 N. E. Oregon St., Portland, Ore. Bids July 12.

INDUSTRIAL, COMMERCIAL & PUBLIC BUILDINGS

Proposed Construction

Mass., Boston—City, Real Estate Comm., City Hall Annex, plans by James Ford Clapp, Jr., 1 Court St., 2 and 3 level garage under Boston Common, $9,500,000. Whitman & Howard, 89 Broad St., Boston, consult. engrs.

Mich., Ypsilanti—Ford Motor Co., 3000 Schaefer St., Dearborn, 400,000 sq. ft. aircraft accessories plant for Parts and Equip. Div. of Ford Motor Co. $4,000,000.

Mo., St. Louis—St. Louis Archdiocese of the Catholic Church, c/o Most Rev. Joseph E. Ritter, archbishop, 3810 Lindell Blvd. St., Zone 8, 1, 2 and 3 story, brick, rein.-con., steel Bishop DuBourg High School, Eichelberger St. and Clifton Ave. $2,000,-000. Joseph D. Murphy, 4746 McPherson Ave., Zone 8, archt.

N. J., Port Newark—Port of New York Auth., 111 8th St., New York, 11, N. Y., Bldg. 139, Contr. PN-150.001. $1,000,000.

O., Youngstown—Lee Rubber & Tire Corp., Albert St., 1 story, 80,000 sq. ft. plant addns. to Republic Rubber (Lee subsidiary), Albert St. $2,000,000.

Tex., Dallas—City, City Hall, Main and Harwood Sts., plans by George L. Dahl, 1920½ Main St., auditorium, $5,000,000.

Low Bidders & Contracts Awarded

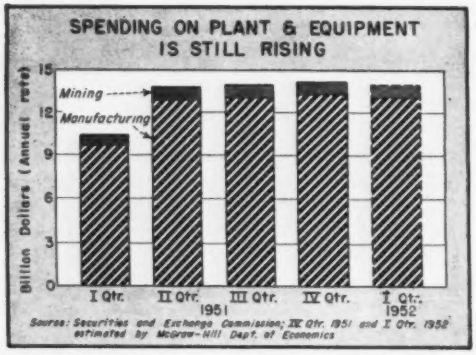
Calif., Atascadero—M & K Corp., 405 Montgomery St., San Francisco, Calif., Fredrickson & Watson Constr. Co., 873 81 St., Oakland, Calif., and Piombo Constr. Co., 1571 Turk St., San Francisco, Calif. Low Bidder. $6,080,000 general contract; Ets-Hokin & Galvin, 551 Mission St., San Francisco, Calif. $808,613, electrical work for Atascadero State Hospital. State Div. Architecture, P. Wks. Bldg., Sacramento, Calif. Bids June 26.

Ky., Louisville—Austin Co., 16112 Euclid Ave., Cleveland, O. Contract Awarded, $3,500,000, plant addns. U. S. Naval Ordnance Plant, Louisville, Ky. Awarded July 2.

Mass., Worcester—Gilbane Building Co., 90 Calverly St., Providence, R. I. Contract Awarded. $8,000,000. Mfg. plant, incl. bldg. and equip., Brook St. Norton Co., 1 New Bond St., Worcester, Mass. Anderson Nichols & Co., 53 State St., Boston, Mass., engrs.

Wash., Moses Lake—Lease & Liegland, 1501 N. 35 St., Seattle 3, Wash. Low Bidder, $1,224,500, est. $1,137,825, 385x 348 ft. rein.-con. hospital at Larson Air Force Base. Inv. No. 51-16. U. S. Eng., Bldg. 602, City-County Airport, Walla Walla, Wash. Bids June 26.

Electrical Business Outlook



INDUSTRY'S PLANS call for high construction activity well into 1952. Much of it will be for defense plants

CMP Hits Construction

Don't be fooled by the slump that's coming in new construction starts—first in homebuilding, then in heavy construction. It doesn't mean the building boom is over. And it doesn't mean there won't be a lot of new customers to connect this year.

This is a man-made slump. It's being engineered by NPA, as part of the Controlled Materials Plan. And here's the reason: There just isn't enough structural steel—or copper—to finish the construction that's underway now and to start much more at the same time.

There's a mountain of industrial construction being started in the second and third quarters of this year (chart). It will take until 1952 to complete most of it. And some new plants to make planes and tanks, steel, aluminum, and other such vital products must be started in the fourth quarter.

That means other buildings—industrial, commercial, and public—can't be started, in most cases. And work already underway will take longer to finish because it will take two or three quarters, instead of one, to get the necessary structural steel.

Building Completions Will Stay High

But building completions will still be very high all through 1951 and well into 1952, reflecting the terrific rate of construction starts to date.

That goes for housing too. Despite Regulation X and the materials shortage, homebuilding this year is likely to total closer to 1 million starts than the 850,000 government agencies are talking about. Most of them are already in the ground. And completions, carrying over some of last year's record starts, will be even higher.

Credit and copper—which is more important in houses than steel—will limit housing more strictly for the next six months. The slump will hit this summer before the steel shortage catches up with industrial construction. But it will be over sooner too.

Congress is likely to ease up on Regulation X—probably not in time to affect 1951 starts much but soon enough to let building get a flying start in 1952. The homebuilders—unlike industrial contractors—don't worry much about steel. So if they can cut short on copper, they might be able to start another million homes in '52.

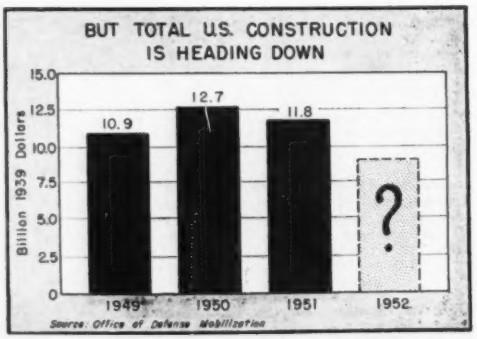
Heavy Construction Will Drop in '52

CMP will govern heavy construction—through steel allocations—through the first half of next year. Washington is betting that the shortage of structural shapes—needed in defense, as well as construction—will hold total U. S. construction in early '52 to 60-70% of the 1950 level. Then supply will improve. So we might average out to 70-80% of 1950 for the full year.

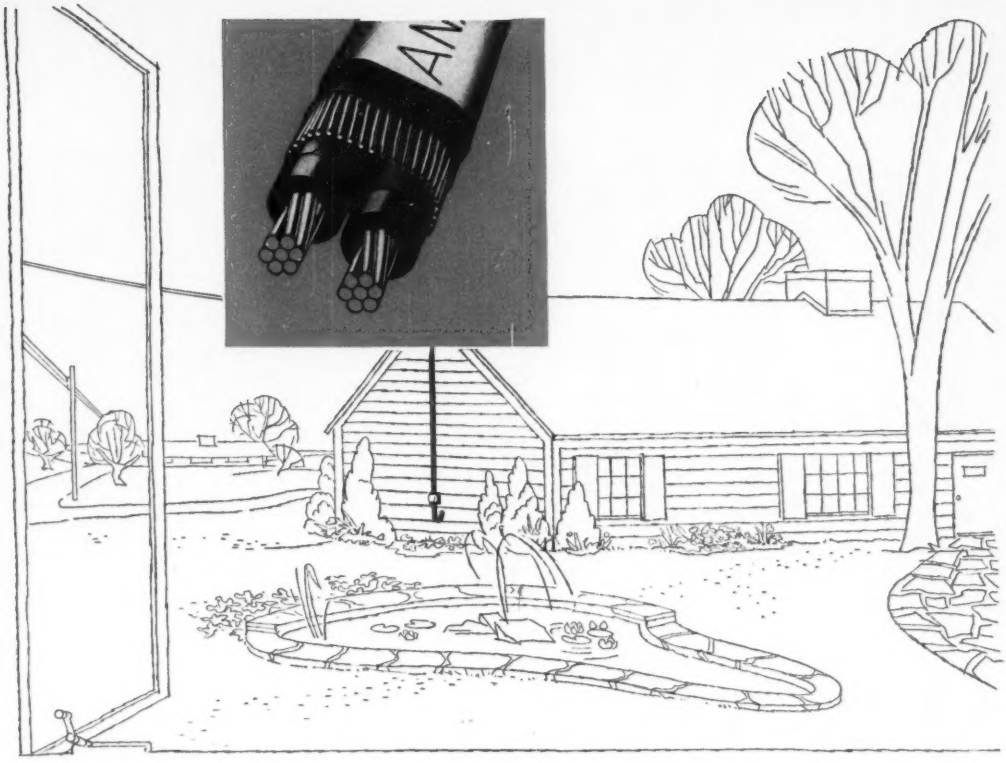
Chances are the upper range of figures will prove correct. Heavy construction will probably be lower than calculated. But homebuilding will run higher. And the totals—if you look back at the 1950 base year and see how high it was—are still pretty impressive in terms of new demand for power.

In a way, CMP will prolong the construction boom by keeping projects on slow schedules while they wait for steel. But it was almost sure to run into 1952 anyway. Most industrial expansion plans, even on original schedules, went into next year. And public construction backlogs are still high.

But restrictions for the next six to nine months won't be enough to build up much backlog demand for 1953 and other post-emergency years. For example, if homebuilding were held to an average of 750,000 starts in 1951-52, we'd go into '53 with a backlog demand of about 500,000. As it stands, we won't drop much under the normal demand for 1 million units a year.



STRUCTURAL STEEL shortage will cause a big drop in overall construction activity in the coming year



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SILVALINE*, Anaconda's completely new service entrance cable, offers greater dependability, longer life and higher resistance to weather. Here are the four reasons why!

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Get complete information on the new Silvaline URC-Type SE Weatherproof Service Entrance Cable from your nearest Anaconda Sales Office. Anaconda Wire & Cable Company, 25 Broadway, New York 4, New York.

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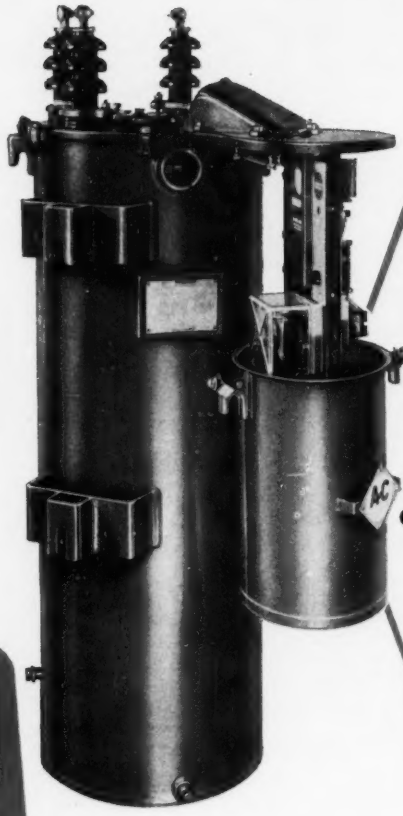

20% Range of Regulation

±1 Volt Band

Raises KWH Consumption

Increases Customer Goodwill

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YOU CAN PROFIT from Allis-Chalmers ⅝% step regulation in the new larger rating of the 50 ampere JFR regulator. Its low price tag holds original equipment cost down . . . makes regulation even less expensive than before . . . and gives you all the advantages of the Allis-Chalmers ⅝% step regulator line.

This means you can increase KWH consumption — and revenue, cut complaints, and increase customer goodwill. That's because Allis-Chalmers ⅝% Step Regulators hold a ± 1 volt band — give you close, accurate regulation over a 20% range.

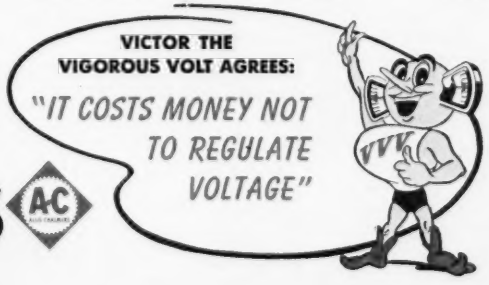
Simple Adjustment

The new 50 amp JFR regulator is fully automatic in a rating of 38.1 kva, 7620 volts, 50 amp for operation at 7960, 7200, 6900, 5000, 4330, and 2500 volts. It has a unit type control grouped on a single panel to make maintenance and adjustment easy. Only two knob settings are needed. Voltage level and voltage band can be set in less than 60 seconds.

Jump-Proof Mounting Brackets

The jump-proof mounting brackets on the new 50 amp JFR Regulator are the same as used on distribution transformers. A heavy driving motor operates under oil for tap changing. There are no commutators, slip rings, brushes, no centrifugal switch.

You are losing revenue every day you wait to correct low voltage. Call your nearest Allis-Chalmers district office today for information on how the 50 amp JFR regulator can cut your regulation costs and improve service. Or write: Allis-Chalmers, Milwaukee 1, Wisconsin. A-3393



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